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# QUESTIONS OF QUALITY IN CANADIAN HEALTH CARE

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## CONTINUOUS QUALITY IMPROVEMENT



### SECOND EDITION

Canada



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# QUEST FOR QUALITY IN CANADIAN HEALTH CARE

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CONTINUOUS QUALITY IMPROVEMENT

*SECOND EDITION*

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VANCOUVER, BRITISH COLUMBIA







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## FOREWORD

I am pleased to present the second edition of *Quest for Quality in Canadian Health Care: Continuous Quality Improvement*.

Assuring and promoting in health care services continues to be a priority for the Canadian health care system. Developing, implementing and maintaining high-quality, cost-effective services presents a number of opportunities and challenges. It becomes increasingly evident that the need for collaboration and a willingness to share ideas across jurisdictions and with other countries is essential.

As health systems reform progresses, opportunities will arise to improve the system. Quality improvement approaches, tools, and indicators have evolved and have introduced organizations to new concepts. It is equally important, however, to understand and address the challenges and barriers to change, and to provide incentives within the system for improvement initiatives which can then be shared across jurisdictions.

The 1999 federal budget announced a major investment in Canadians' health and quality health care. A major part of the reinvestment in the health care system is on promoting health research and innovation and on improving health information. Health research is a cornerstone of quality health care system of the future. The evidence generated by health research leads to the discovery of new cures, medical technologies and procedures that can improve the health care system. Improving health information is crucial to improving the delivery of health care, the accountability of the health care system and the access Canadians have to information about health and health care.

Although continuing health research and innovation and improving health information are required to improve the quality of health care for Canadians, national, provincial/territorial, regional and local approaches are also required to transform the latest research and health information into improvements in the quality of health services delivered to patients. In making these improvements, it is essential to consider the needs and concerns of health care providers and consumers by involving them in the process of improving the system.

These approaches can create a dynamic framework that emphasizes the strengths of the existing health care system while incorporating continuous quality improvement (CQI) concepts. It is essential that any approach has the ability to integrate existing and new approaches to evaluate and improve health care and health outcomes. The challenge is to find the best ways to improve systems: professional, organizational and administrative approaches that are relevant to Canadian health care.

The literature is beginning to show the convergence of models/frameworks that incorporate scientific measurement research and mechanisms by which these ideas can improve health care. The creation and exchange of ideas is an integral part of the development process. There is also evidence of practical applications of quality improvement. As we work towards the integration of systems to improve health care, we learn from experiences in various sectors. For example, process change in long

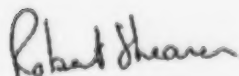


term care and community care programs has stimulated research in their adaptation to acute care programs.

An earlier report, *Quest for Quality in Canadian Health Care: Continuous Quality Improvement* (1993), identified information available in the existing literature on quality initiatives, achievements and implementation strategies. While implementing and adapting existing procedures to meet the needs of the individual systems is often the strategy of choice, new information and ideas have also been proposed and implemented.

A number of consensus items regarding the implementation of quality approaches in Canada were outlined in the original *Quest for Quality* document. While in the beginning the focus was on establishing research and national systems, emphasis has now shifted to the outcomes of these initiatives. *An Inventory of Quality Initiatives in Canada: Toward a National Strategy for Quality and Effectiveness in Health Care* (1992) and the Second Edition in 1996 compiled information on quality management initiatives across Canada that identified a number of future directions to assist with the formulation of national strategies for quality and effectiveness in health care.

This, then, is a second edition of *Quest for Quality in Canadian Health Care: Continuous Quality Improvement*. Throughout this document, there are illustrations of methods to approach continuous quality improvement; examples of Canadian initiatives and innovations that have had impact; and ideas to challenge existing practices. We hope that this document serves as a useful resource for encouraging and supporting quality initiatives and that continuous quality improvement will be recognized as a "best practice" in itself, and as such will become an integral part of our health care system.



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Robert Shearer  
Director, Health Systems Division  
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Health Canada



## PREFACE

This second edition is in a great measure a new book. Most parts of the first edition have been significantly revised.

The Advisory Team provided direction for the second edition. They reviewed the manuscript in part or whole; their insightful and rigorous responses often brought me to recast elements of this project. Having acknowledged all of this good guidance and advice I accept any shortcomings as my own. Special thanks go to Judith Arnott for desktop publishing work, and Dorothy Bell for secretarial support.

This edition contains new sections on Systems, Learning Organizations, Culture, Indicators, and Evaluation. It retains considerable core material, and aims to maintain a user-friendly format. *Quest for Quality* contains current references and an extensive bibliography as well as examples of quality initiatives from across the country. Quality improvement efforts are found throughout all areas of health care and the document attempts to illustrate this.

The themes of Continuous Quality Improvement are several: leadership, commitment, partnerships, team building, as well as the central fundamentals of process analysis and customer focus in a milieu of ongoing improvement. Integration and system alignment of these themes is imperative within a "learning organization."

This document presents an outline of continuous quality improvement applied to health care organizations. It emphasizes that CQI requires major personal, organizational and system-wide changes that necessitate leaders to learn new skills. Once mastered, these tools and methods can be applied with teamwork and collaboration to the entire organization.

*If we spoke a language different from English perhaps we would have a single word to link together the three facets of our quest: improvement, change, and learning [sic]. From the viewpoint of systems they are deeply united.*

— Berwick, 1996



### **Vision**

As a facilitation tool, this document can be a catalyst for improving the quality of health care services in Canada. The CQI principles described may be applied to organizations in the many settings of health care. Effective reform in health care implies collaborative changes across the entire health care system.

#### **SYMBOLS**



Across the centuries symbols have been used to represent important values and principles. Visuals can exemplify, embody and integrate key concepts of a vision. In addition, symbols are beneficial in setting a scene, approach, milieu or culture. The symbols used throughout the document have been used effectively in CQI workshops over the past four years.

This visual integrates the following key concepts.

- ◆ The centre of the symbol is the *customer* (the patient, client, or resident).
- ◆ The surrounding pieces, as in a jigsaw puzzle, represent areas of *knowledge and skills* that are important for customer-centred practice. These pieces include *leadership, teams and tools, research-based practice* and *ethical issues*.
- ◆ The outline of the house symbolizes the *culture* of an organization.
- ◆ The overlapping houses symbolize *collaboration* and *partnership* that are essential within organizations, regions, and the entire health care system.

The original visuals were large paintings designed by Laurie Duke, and the computer graphics were prepared by Cathy Couper.



### ***Goals***

The goals for this document are to:

- ♦ Promote and provide an understanding of the basic CQI principles applicable to health care.
- ♦ Provide health care practitioners with an appreciation of how the application of quality improvement can satisfy the needs of organizations and, most importantly, those working within them and all those whom they serve.
- ♦ Provide a general framework highlighting key developmental areas for implementing CQI in the Canadian health care system.
- ♦ Provide a basis for informed decision making in the implementation of a CQI strategy in all sectors of health care.
- ♦ Provide an extensive bibliography that addresses the major issues involved in CQI.
- ♦ Provide current information on indicators and evaluation.
- ♦ Promote networking, collaboration and sharing of new developments across the country.

The introduction emphasizes the values held by Canadians that are underpinnings of Canadian health care.

MaryLou Harrigan  
Author and Editor  
Vancouver, British Columbia  
November 1999



## ACKNOWLEDGEMENTS

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# INTRODUCTION



PART ONE







## Overview

*This section begins by outlining the values of Canadians regarding their health care as examined by the National Forum on Health. It then highlights the climate of change in health care, particularly the shift to non-institutional care and an increased emphasis on health promotion and population health. Finally, it introduces the use of Continuous Quality Improvement, with its emphasis on structure, processes and outcomes, as an effective strategy in improving health care delivery and quality.*







## CHALLENGES

*The evidence to date tells us that if we simply downsize the status quo, instead of fundamentally redesigning the delivery system, we will destroy quality and ultimately access to the health care services Canadians want and need.*

—Verlaan-Cole, 1996

The National Forum on Health was appointed by the federal government to “involve and inform Canadians and to advise the federal government on innovative ways to improve our health system and the health of Canada’s people” (National Forum on Health, 1997). The Forum focused on long-term and systemic issues, and examined four key areas:

- Values
- Striking a balance between acute and chronic health care, community care, and health prevention and promotion
- Determinants of health
- Evidence-based decision making

The Forum explored core values of Canadians with regard to the health care system through original public opinion research, focus groups, quantifiable research, and a review of Canadian and international experiences. They concluded:

- ♦ “The Canadian approach to the provision of health care services continues to receive strong and passionate support. The public does not want to see any significant changes that would alter the fundamental principles of our publicly administered health care system. They have an abiding sense of the values of fairness and equality and do not want to see a health system in which the rich are treated differently from the poor. The Forum supports this view and supports necessary changes to our health system only if we preserve the essence of medicare—universal coverage based on need, without financial barrier, portable across the country, to a comprehensive array of publicly administered health care services.”



- ◆ "Although other competing priorities emerged over the period of the discussions, *equality of access* is a primary one. The Canadian values are wrapped up in this equality—everybody gets relatively equal care when they are sick and nobody has to lose their house to pay their hospital or doctor bills. This is the feature which is seen to distinguish us most from the American model, which is the point of comparison."
- ◆ One of the ways in which equality of access in health care is different from the "market system" stems from the fact that being as healthy as possible is seen to be fundamental to the quality of life that is part of being Canadian.
- ◆ Equality of access is also seen to be essential to opportunity. Being healthy allows one a fair and equal chance of success.
- ◆ Many saw the health system as a smart investment on the part of Canada—one that gives some comparative economic advantages and makes society more stable.
- ◆ An overwhelming majority of participants stated that medicare was, and is, an essential part of their national identity.

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*Our health care system defines us as communities, as a society, and as a nation. What Canadians are prepared to do, and more importantly, what we are not prepared to do for each other when we are sick, vulnerable, and most in need, says a great deal about Canada, our basic values, and the values that we want to hand on to future generations of Canadians.*

Margaret Somerville, LLB  
Founding Director, The McGill Centre for Medicine, Ethics and Law  
McGill University, Montreal, Quebec

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Canadian underpinnings of the health care system include the premise that it ought to be government run and not for profit, that money is not the primary consideration and that all are entitled—as a matter of citizenship—to equal access to quality care. This typically Canadian approach is, for many people, emblematic of a commitment to compassion, to equality of opportunity, to a sense of community and to a common purpose.



People understand the Canadian health care system to be threatened by steadily rising costs and the inability of government finances to absorb those costs.

What the public wants from reform is a program that is consistent with the existing one: a high-quality system founded on the principle that health care should be accessible to all who need it, on an affordable basis. They like the way it works, the security and peace of mind that it provides. They like what it says about Canadians as a people.

People want to ensure that the Canadian health system provides not only equality of access but also quality of care. There is also the impression, however, that there is a conflict between these two pillars of the health system and in order to have more of one you may have to give up some of the other. "The Forum believes that this conflict is unfounded and that both equality of access and quality of care are not only possible but are readily achievable within our health system."

Rather than the utilitarian or libertarian viewpoint that may be emphasized in other health care systems, what distinguishes the Canadian health care system has been the communitarian ethic that pervades it. Though this system may at times prove expensive, no matter what the fiscal restraints, it is recognized that there must also be an ethic of quality. Distributive justice must be applied in considering health care resources and particularly their allocation in times of scarcity.

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*To begin to speak about ethics is to ask ourselves, 'What kind of world do I want to live in?' If we want an environment in which there is respect for others, honesty, compassion...we have already set a context for our discussion. With those values as guides, we now think about how to ensure that they endure by way of our actions. Finally, of course, it comes down to courage – how to act when I know what to do, but when I also know that what I should do will be very difficult for me.*

Abbyann Lynch, CM, PhD  
Director, Ethics in Healthcare Associates  
Toronto, Ontario

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## HEALTH REFORM

Management literature tells us that making structural changes alone will not lead to the development of an effective integrated service delivery system.

Structural changes must be supported by:

- changes in roles and relationships among providers
- changes in attitudes and knowledge
- changes in the way resources are allocated

### *Climate of Change*

Changes to health care and the health care system in Canada are occurring rapidly. These changes affect not only the nature of health services themselves but also the way in which these services are provided. New technologies emerge daily and constantly expand the choices available to health care providers and consumers. Providers of care are becoming further specialized in what they do and how they do it and, of course, funding for health care becomes more threatened in the face of competing societal needs. In the midst of this, consumers of health care continue to expect quality care without dramatic increase to the tax base that funds the care. All those who are involved in the health care system, be they consumer, provider or funder, are asking if we are doing the right things, in the right way, at the right time, in the appropriate setting, with the right results.

### *A Shift to Non-Institutional Care*

The balance within the health care sector has in recent years shifted toward non-institutional care. This has taken three main forms:

- An increase in home care and other community-based services, and a reduction in the use of inpatient hospital services in favour of day or outpatient services
- The reduction or elimination of particularly lighter-care nursing home beds in favour of home care and congregate housing
- An emphasis on "wellness" services such as prevention and health promotion (National Forum, 1997)

The expansion of home care, particularly where it is fully integrated with other parts of the health system, has substantially reduced the need for admission to long term care facilities. Consideration must not only be given to the cost of keeping someone at home rather than in an institution, but to the effect on family caregivers, both financial and non-financial. No indicators have been developed to determine when community care



*Without assurance that needed sickness care will be available when required, there will be little enthusiasm for even the most effective health promotion and prevention interventions.*

— National Forum on Health, 1997

and care by families are overwhelmed, even though some assessment tools are available (National Forum, 1997).

With regard to health promotion and prevention the National Forum stated, "We have two principal conclusions on these subjects. First, evaluation and accountability criteria must be appropriate to the programs and services in question. This means that, for example, health promotion programs ought to be subject to the same rigorous scrutiny as sickness care programs. The goals of these programs must be articulated, and the complexity of the relationship between expenditures, services and outcomes must be acknowledged. Furthermore, we must recognize that prevention and health promotion programs do not affect all segments of the population equally."

### *Key Issues*

Current and future key issues and challenges include:

- accountability structures
- rationalized allocation of resources
- more coordination with other policy decision areas (social sectors)
- health shifting from an institutional base to a community base (before a satisfactory community base is established)
- improved sharing of information across agencies
- potential for conflict between evidence and values
- continued examination of the broad determinants of health
- complementary or alternative medicine

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*The historic agreement on the Social Union, signed February 4, 1999 by all first ministers, with the exception of the Premier of Quebec, provides a collaborative framework for social policy in Canada. With the Social Union Agreement, governments reaffirmed their commitment to respect the principles of Medicare, recognized the importance of being accountable to Canadians for the health system, including measuring progress on both the performance of the system and the health of Canadians.*

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### POLICY FRAMEWORK

The Working Group on Striking a Balance recommends that the conference of Federal/ Provincial/ Territorial Ministers of Health articulate a national health policy framework for the 21<sup>st</sup> century which clearly establishes that the primary mission of the health sector is first to prevent and treat illness according to the fundamental principles of Medicare and, second, to collaborate with other sectors in the development of population health interventions which have the most potential to improve the health of Canadians.

— National Forum on Health, 1997

### POLICY DEVELOPMENT

The Greek origin of the word "policy" links it to citizenship, government, polity, citizen, city. The idea of policy arises originally from the relationship of citizens to one another in a common public space.

Policy always has an irreducibly moral dimension insofar as it involves a decision about how to act toward affected others who are not directly involved in actually deciding what to do about an identified problem. Policy is a course of action or a guide to action. It is also a kind of public practice of deliberation in which various actors participate. To speak of policy is to speak of both a social-political process and the results of that process, which in turn are used to guide or regulate other processes or practices. Policy thus encompasses both means and ends. It is achieved through prudent and practical wisdom.

If health policy is regarded as having an implicitly moral dimension, policymakers must be regarded as agents who are involved in making or shaping moral choices on behalf of the larger society.

(Adapted from Malone, 1999)



## QUALITY AND CQI

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*If survival of the Canadian Healthcare System is desired by Canadians it must be managed differently than in the past. Continuous Quality Improvement is a management philosophy that offers promise to save our system through the reduction of inefficiencies and inappropriate variation as identified by line healthcare professionals and support staff. The spark and direction to begin the implementation of Continuous Quality Improvement must come from medical, nursing and administrative leaders who will be required to set the stage, create the culture and provide a vision of a preferred future.*

R.H. Wensel, MD, FRCP(C)  
Health Care Consultant  
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In this climate of change, quality and value for the money spent in health care has become the primary focus. The Continuous Quality Improvement (CQI) concept is certainly one of the more exciting and far reaching advances in Canadian quality of care management. Continuous quality improvement is an approach to quality that originated in industry and has received increasing attention from the health care system. CQI is a management philosophy and system which involves management, staff and health professionals in the continuous improvement of work processes to achieve better outcomes of patient/client/resident care. It involves the application of statistical methods and group process tools to reduce waste, duplication, and unnecessary complexity in work. The goal of CQI is to consistently meet or exceed the needs of patients, families, staff, health professionals and the community.



*New directions in the delivery of health care are pressing the health care field to re-evaluate how quality is assessed, to consider how information about the quality of care delivered may ultimately be used, and to challenge existing notions on the definitions of quality.*

—Harrigan, 1992

The concept of CQI has been advanced as an effective strategy for improving quality. Quality in health care management is a key challenge that must be considered from a strategic point of view, and includes such dimensions as organizational vision, values, attitude, policy planning, leadership, and the pursuit of excellence through continuous improvement. It is, therefore, of utmost importance that health care providers and funders understand and implement this broader dimension of quality.

Quality improvement as a management method seeks to develop the organization in a new way so that, in an orderly and planned fashion, "everyone at all levels can play an active role in understanding problems and the processes of work that underlie them, collecting and analyzing data on those processes, generating and testing hypotheses about the causes of flaws, and designing, implementing, and testing remedies" (Berwick et al, 1990).

Quality is a multidimensional concept that can be defined many ways to meet specified goals and standards. For this reason, it is important to clarify intentions and perspectives when defining quality.

#### ***Structure, Process, Outcome***

Structure, process and outcome are basic in assessing quality of care. In the past, most evaluation has focused on evaluating structure. The need for improved outcome evaluation is now recognized, and the quest for outcome measurement is presently receiving more attention; however, it is also acknowledged that establishing credible and acceptable outcome evaluation will be a lengthy and resource-consuming task. While the search for outcome measurement proceeds, many within the health care system have turned to the examination of the processes used in health care with the belief that, by improving process, both quality and efficiency can be enhanced.



In general, quality reflects the extent to which health services meet the specified goals and standards of the accepted norm for good care and health service. Quality in health care is judged by three key areas, namely structure, process, and outcomes. Structure comprises the necessary resources to conduct the task (e.g. the resources to deliver the care, the physical resources, facilities, organization, standards, policies). Process is the act of doing the task (inputs-tasks-outputs, i.e. the care itself), and outcomes are the result (e.g. effective care, patient satisfaction, efficient use of resources).

### *Perspectives*

Quality in health care can be reflected through the perspectives of its different stakeholders: the patient (client, resident), the provider, the funder, and society. From the patients' perspective, quality is defined in terms of how well their needs and expectations for care and service are met. For the providers, quality includes clinical effectiveness in terms of the correctness of the diagnosis and the appropriateness and efficacy of the treatment and care provided. From the system's perspective, quality is concerned with the efficiency of the services provided and the cost-effectiveness, management and use of resources to achieve desired health outcomes. Finally, to society, quality is often measured in terms of value for money and benefits to the community at large.



## THE FOCUS OF CQI

### **Background**

The concept and approach of CQI has been studied and promoted by leading quality management researchers and industry leaders (Deming, Juran and Crosby). The total quality management approach has revolutionized the industrial world with the search for manufacturing "excellence" through higher productivity, lower cost and a competitive edge. Deming is credited with being the main generating force in Japan's post-World War II rise to manufacturing excellence and as a world industrial leader. Deming's 14 Points (see Appendix A) for effective quality management provided the framework for development. The lessons learned from Deming's strategy for quality are applicable to the achievement of excellence and quality in health care management.

*Modern QI concepts had their origins in the statistical process control measurements developed by Walter Shewhart at the Bell Telephone Laboratories in the 1920s.*

*The marriage of those techniques with an overall management philosophy by W. Edwards Deming, Joseph Juran, and others has resulted in the quality movement. Although arriving later in health care than in other fields, QI concepts have rapidly proliferated through the efforts of Berwick, Batalden, and others.*

— Solberg et al, 1997

The focus of CQI, expressed in its simplest terms, is on:

- ◆ **Processes** of health care and health care delivery
- ◆ **Customers** who are served
- ◆ **Continuous monitoring of quality** with the intent to improve
- ◆ **Committed leadership** necessary to make it happen
- ◆ **Education**
- ◆ **Long-term commitment**





### THE PROCESSES OF HEALTH CARE

Q CQI has at its central core the examination of process. It is recognized that much of what is done within health care involves many different people and disciplines, and processes that cut across traditional department and service boundaries. Processes can be highly complex; careful attention is required to determine exactly what a particular process entails.

*As a result of process complexity, there is a tremendous amount of waste and rework. There are some studies which suggest the amount of waste and rework can amount to 25-30% of total costs of production.*

— Berwick et al, 1990

### THE CUSTOMERS WHO ARE SERVED

Q CQI focuses on the customers served by a particular process and how the process can be improved for them. An integral part of CQI therefore involves the identification of the customers who are served. The term "customer" is often not comfortable for those involved in health care because of its industrial connotations; however, the concept behind the term applies. Within the health care system customers are, of course, the patients served. (In community settings the term "client" is used, and in long term care facilities the term "resident.") Other customers exist as well; service providers in turn have other service providers as their customers, and internal providers who may serve groups outside the organization.


### CONTINUOUS MONITORING OF QUALITY

Q Once customers have been identified it is necessary to assess, in a collaborative manner, their expectations and requirements. The various methods of assessing customer needs also become a focus for CQI. Finally, it is necessary to evaluate if the needs and expectations of customers are being met on a continuing basis.


The goal is the achievement of improved processes to meet customer needs and expectations. All involved in carrying out a particular process need to be a part of helping to improve it. A key component of improving processes is staff and physician involvement. CQI is more than improving a process at a single point in time. It is, rather, an ongoing effort to continually improve the process to better achieve the intended results. Therefore, at the very heart of CQI is the premise that improvements in care and service can always be made.




### COMMITTED LEADERSHIP

 Implementing CQI is a demanding task involving the entire organization if efforts are to be successful. The development of a corporate culture is essential—one which recognizes the centrality of quality management for all aspects of the organization's activities and includes a commitment to constant improvement and designation of adequate resources.

### EDUCATION AND LEARNING

 To implement such a culture, dedicated and knowledgeable leaders are needed to promote and support continuous quality improvement and ensure that it is an intrinsic part of organizational philosophy. Involvement of all staff in its pursuit is central. Appropriate education for all involved in quality management is a priority. Effective leaders can facilitate these efforts.

### LONG TERM COMMITMENT

 Even with all of these prerequisites in place, implementation of CQI is a lengthy and involved process; and the results of the exercise do not immediately materialize. A five-year implementation time is often suggested as realistic; however, the timeframe will be dependent on a variety of factors including the priorities to be addressed, organizational stability, resource availability, and effective educational strategies.

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*In community health care, we are in the process of exploring the outcomes of newer approaches to health: health promotion, community development and social action. Quality management offers us the only logical way to evaluate these approaches and ensure that we are making the best possible use of public resources.*

S. Arrojado  
Executive Director (1990 to 1997)  
Ontario Association of Health Centres

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## THE POWER OF CQI FOR PLANNING

In the Canadian health care context the power of CQI for program planning, development and evaluation has not been fully explored or utilized. To date the implementation of CQI has focused primarily on improving work processes, improving quality and cutting costs of existing services. Information generated through the implementation of CQI programs could be used by policy and decision makers when they consider the health system at the macro level.

CQI is an essential component of planning in terms of attention to structure, process and outcomes. In addition, the strong customer focus, which is inherent to CQI, ensures that those who utilize the services and programs will be consulted on all planning aspects. Experience to date in using CQI for planning indicates that it results in programs which are relatively easy to implement, operate within budget, and can be evaluated with ease. While experience is limited, CQI may in fact reduce the need for project teams to solve problems, as there are mechanisms in place to address changes as they occur.

Perhaps the greatest contribution of CQI to planning is that it creates a program which, from the outset, is based on doing the best job to produce the highest quality of service for the least cost. Quality in planning can prevent many of the problems within the organization and with customers that occur in staffing, capital expenditure and integration. In addition, CQI provides a clear framework that assists even relatively inexperienced planners to successfully achieve their goals. The principles of CQI in health care planning can be applied to the improvement of both the process and the results of a three- to five-year plan. Using CQI methods and tools, the organization and the people within it can achieve outstanding, highly focused improvements.

An example of long-range planning and forecasting is provided by McGill University...

*At the McGill University Health Centre (MUHC), extensive planning for clinical services began in the summer of 1996, following a feasibility study completed in 1994 to determine whether five of the McGill-affiliated hospitals could merge, reorganize their services and move to a new building adapted to modern needs.*

—Katravas, Major et al, 1999



### INTERNATIONAL & NATIONAL LEVELS

A continuous quality improvement approach has been successfully used at international and national levels in such areas as oral health care, the prevention of hospital-acquired infections, and the management of diabetes.

*By the year 2000, there should be structure and processes in all Member States to ensure continuous improvement in the quality of health care and appropriate development and use of health technologies.*

World Health Organization Regional Office for Europe.  
Discussion Paper: *Continuous quality  
development: a proposed national policy.*  
Copenhagen: WHO, 1993.



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## CANADIAN INITIATIVES

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An Inventory of Quality Initiatives in Canada: Maintaining and Improving Quality in Health Care (1996) provides...a "snapshot" of quality initiatives across Canada. ... Emphasis is placed on progress in quality management, practice guidelines, outcome measurement, and utilization management. It explores the progress in collaboration as well as provides insight into the use of information systems.

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Health Canada

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Quality improvement initiatives are seen across the health care continuum. Examples of quality improvement initiatives from acute care, long term care and community care agencies in Canada are provided throughout this document. The Appendices provide further information and contacts for these initiatives.

### *Continuing Education*

Initiatives of Canadian health organizations will enhance the preparedness of health care workers to effectively manage and contribute to the CQI environment. Certainly many professional organizations are initiating training programs for continuing education on CQI.

### *An Example*

The Canadian Medical Association has initiated a series of quality management workshops for physicians and other professionals. These are designed specifically for senior clinical managers and focus on practical tools for managing effectiveness, efficiency, risks and utilization. Developed in cooperation with provincial/territorial medical associations and the Canadian Council on Health Services Accreditation, these educational efforts attest to the fact that quality of care has become a top priority for health professionals and health care facilities.

### *Undergraduate Programs*

Several medical and other professional schools are including quality projects and teaching in their opportunities for internship. There have



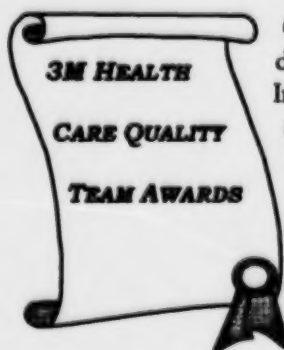
been proposals for expanding on these areas even at the undergraduate level of teaching. All of these efforts will have a positive impact on participation in quality management over the longer term.



Examples of quality improvement plans and current reports are provided throughout this document.

A number of Internet sites that have particular relevance to quality in health care issues are located in Appendix B.

### THE 3M HEALTH CARE QUALITY TEAM AWARDS



Quality is central to the management and delivery of health services in Canada. Innovations that show evidence of sustainable improvements in programs and services can be achieved through teams. The process of improvement in health care depends on successful application of quality values and approaches to management systems and processes.

Quality teams are at the heart of this improvement, and the Health Care Quality Team Awards are offered by the Canadian College of Health Service Executives and 3M Health Care to encourage this process.

Awards are made to the qualifying team in each of the following categories:

- ☒ Small and rural providers of health services
- ☒ Large/urban and regional providers of health services

Examples of Quality Team Award winners and submissions are provided throughout this document. Executive Summaries of the Health Care Quality Team Initiatives, including the list of submissions from previous years, can be accessed online at <http://www.cchse.org>



# FUNDAMENTALS



PART TWO







## Overview

*This section discusses the design of Continuous Quality Improvement (CQI) for health care.*

*The fundamental components of CQI are:*

- ◆ A Customer Focus
- ◆ Processes
- ◆ Systems Improvement

*The orientation of a health care organization to its customers is fundamental to the successful implementation of CQI. This entails understanding all of one's customers and a commitment to measuring, understanding and satisfying customer needs.*

*Processes in health care are complex. The work process has many steps and involves different disciplines and departments.*

*Understanding the organization as a system is vital, as is having a model for change and improvement.*







## DESIGNING CQI FOR HEALTH CARE

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*Part of the difficulty involved in introducing total quality management concepts into health care is that the language of quality and of paradigm change evolved in a business or industrial setting. In health care environments, these concepts must be translated into health care terms and the jargon buzzwords downplayed if total quality management is to have credibility with health care professionals.*

Philip Hassen  
CEO & President  
Providence Health Care, Vancouver, British Columbia

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The application of continuous quality improvement principles in health care organizations has to be designed specifically by them. Differences exist in how customer relationships are formed and defined, in how production processes are developed, and in the ability of the ultimate customer to evaluate the outcome (Wakefield and Wakefield, 1993). *"Implementation methods cannot simply be transplanted from industry or copied from another organization. Health professionals do not perceive their work processes as similar to a manufacturing process"* (Hassen, 1993). Unlike machines, patients have significant individual differences in their treatment needs and health outcomes. Clinical outcomes in health care are tied to treatment plans that fit the needs of particular patients or improve the standard of care to groups of patients, rather than applying an identical treatment procedure in all cases.



## CUSTOMERS

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*Effective teams, organizations, and leaders exist to serve others.  
And those who provide the highest levels of service/quality enjoy  
the richest rewards.*

Jim Clemmer  
President  
The Clemmer Group Inc., Kitchener, Ontario

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Customers are individuals or organizations who maintain a relationship that contributes to the goals and objectives (outputs) of health care.

### THE ROLE OF THE CUSTOMER

A fundamental underpinning of the successful implementation of CQI is orientation of the organization to its customers or, more importantly, to satisfying its customers' needs. Essential to the creation and maintenance of quality care is the thorough understanding of customers and their needs. The transition of an organization or care provider to a "customer satisfaction focus" implies an ongoing commitment to talking with and listening to customers in order to understand the expected results, what should be done and how to do it. It implies active communication and shared decision making with the people served.

Although health care is primarily a service industry, the idea that people who use health services are *customers* has traditionally been foreign to the health care environment. There is often uncertainty about what to name the people to whom we are committed to caring. Whether we want to call them patients, residents, clients or customers, the name is less important than the underlying principle that they must be the most important focus of the service delivery process. Consideration for their needs and for what is appropriate and safe care must ultimately guide the development and delivery of programs and services.



## DEFINING THE CUSTOMER

Berwick defines customers as "people who depend on you." The definition of customer in the CQI environment reaches far beyond the relationship between a patient and the organization or individual who provides health care. With the growth of home care and community services, health care organizations and health professionals (e.g. home care organizations, physicians, hospitals) must form partnerships to provide integrated health care services to patients. Partnerships promote shared decision making.

### *Internal and External Customers*

The concept of internal and external customers is referred to in CQI literature. Internal customers are broadly defined as those you work with in your day-to-day environment. These will, of course, vary between organizations and individuals. For example, within health care facilities internal customers include staff, managers, health care practitioners, boards of directors, and unions. External customers include patients/clients/residents, families and volunteers, organizations, and other people who operate outside the health care facility but depend on or contribute to its function, such as suppliers, other health organizations, funders, and the community. The critical aspect of the internal/external customer concept is that the creation of quality care is an interactive process that is part of larger systems (e.g. the health care system, private business, government, community) and not limited to an environment over which one can exert direct control.

### *Staff as Customers*

The consideration of staff as customers is an important aspect of CQI and may effect a radical change in how work is produced as organizations develop. Many health care organizations have traditionally been organized as bureaucracies and, accordingly, the work of caring for customers has been compartmentalized between departments and professions. Power, authority and decision making have been concentrated in the upper levels of management and medical staff who have maintained responsibility for fiscal and clinical outcomes.

CQI requires that all staff share the quality vision and an understanding of the expected goals of the organization in order to work actively toward achieving them. Accordingly, CQI will be successful only in organizations where the culture recognizes and accepts that the work of each staff member adds value and contributes positively to the overall quality care output. This implies an interdependence between staff as opposed to hierarchical position, professional status, or an affiliation to a



department or program. It also implies a change in how unions see their role and, more importantly, how unions and management interact. In the CQI context, staff who are "customers" of the people they work with will enjoy an improved quality of working life, and their perception of the value of their work to the organization should enhance job satisfaction. It is critical that this concept be shared and understood by unions if the organizations are to work effectively toward improved quality care. Conversely, management must respect and understand unions and their roles.

### ***Support for Staff***

The staff within a CQI environment need support to redefine their role in two ways. The first is as a supplier of service to other internal customers (staff, managers, health practitioners) and external customers (patients/residents/clients); the second is as a recipient of service from others. This may require a change in thinking about the purpose of jobs, how people function on a day-to-day basis and how they fulfil their responsibilities to each other. In CQI the effect of positive contributions of individual staff members is cumulative and, when it meets the needs of the customer, it equates to quality health care.

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*In my position of Director of Clinical Services, one of the things that I do is support the practice of nurses in 71 branches across the country for the influenza season each fall.*

*The cycle of continually checking with my internal customers and incorporating their responses into ongoing revisions of the influenza program enhances the quality of service I provide to the branches and, in turn, the quality of service they provide to Canadians.*

Janis Leiterman  
Director, Clinical Services  
VON National Office, Ottawa, Ontario

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The need to stay in business and ideally to expand one's share of the market has long induced private business to strive to meet customer expectations. There is a wealth of knowledge and experience into which the health care sector may tap; however, the lack of normal market forces and the limitations of health care services to impact on health status necessitates a unique understanding of the concept of customer satisfaction in health care.



In the day-to-day business world, customer satisfaction can be measured by consumption. If the product meets the customers' expectations, more products are purchased. There is a concern in health care that the same principle will hold true; however, it is not logical to believe that if individuals undergo successful cardiac surgery they will line up at the door next week wanting it again.

CQI does not require that the health care system provide for every whim and demand of the customer. The experience of organizations that have invested heavily in understanding and satisfying customers indicates clearly that health care consumers want to have services that are safe, appropriate to their needs, offered in a way that is acceptable to them, and accomplish the intended results. The fear that increasing quality equates with more demand for service per individual customer has not been substantiated to date.

### ***Customer Oriented Culture***

The creation of a customer-oriented organization is an integral part of the overall CQI process and implies a sincere ongoing commitment to measuring, understanding and meeting customer expectation. As with any re-orientation or re-adaptation of an organization, adapting to a customer-oriented focus implies changes to the philosophy and culture of the organization, the shared understanding of the business of the organization, and the processes used to accomplish the work of the organization.

### **INTERDISCIPLINARY TEAM**

As organizations and the people who work within them gain an appreciation of the value of the work of individuals to customers, commitment of the organization to maximize staff potential and empowerment take place. This implies a significant change in the day-to-day working relationships within the organization. For example, the role of the manager is changed from a primary function of controlling and directing workers to one of facilitating, educating, coordinating and recognizing. Relationships between health professionals and those who work with them are transformed from a multidisciplinary to an interdisciplinary team approach.

The challenging goals of the health care system are to make the best use of resources, coordinate care, avoid duplication, and eliminate gaps in service. Competition and territoriality among health care organizations and providers have frequently deterred efforts to cooperate and collaborate. CQI places the needs and expectations of the customer above those of the organization, and facilitates systemic changes toward greater collaboration and better use of resources throughout the health care system.



## SPECTRUM OF CUSTOMERS IN DIFFERENT SETTINGS

### *Across the Continuum*

Ensuring "customer needs" are understood and met can be well addressed across the continuum of health care—from community health centres to hospitals to long term care organizations. Some examples follow.

### *Community Health Centres*

The involvement of customers or clients in all aspects of operations is a fundamental principle underlying community health centres in Ontario. Accountability between the customers and the organization is often achieved through having client membership required on boards of directors, committees and advisory groups. For example, when a walk-in clinic for homeless and psychiatrically disabled clients was funded, clients from both these groups were actively involved in planning and evaluating the program. In addition, the staff of agencies who work with these clients were identified as customers and were similarly involved.

### *Long Term Care*

A comprehensive survey has been completed for six directly managed care centres in the Simon Fraser Health Region, British Columbia. This continues the extensive customer focus of the former Pacific Health Care Society [Queen's Park and Fellburn Care Centres](Harrigan, 1995). Residents, families, staff and community representatives such as physicians, volunteers and educators were recently surveyed for their opinions on quality of care, services and the environment. A goal of this Residential Care Satisfaction Assessment Survey is to develop a standardized questionnaire to benchmark internally and externally. (See Appendix C for contact information.)

### IN MENTAL HEALTH SERVICES

*... a true 'paradigm shift' in mental health services.*

*Not only are we working towards new initiatives, we are focusing on outcomes, allowing services to shift to meet broader initiatives on behalf of the clients. In line with achieving accreditation status, the focus on mental health reform is looking at the quality of life for individuals, and has shifted in the delivery of services towards greater input from consumers. At the same time there is a shift in services from inpatients to outpatients and the need for collaboration, partnerships, and consumer service and satisfaction.*

— Keller, 1997



## Hospitals

At St. Joseph's Health Centre in London, Ontario, a Radiology Quality Improvement Team considered the needs of their "customers." Through dialogue with referring physicians and patients who used their service, they were able to determine those areas in which there were barriers to providing the premiere support service that was needed.



The initial step was a difficult one that involved a change in paradigm from a provider-focused service to one that focused on the customer. This then enabled the team to critically examine the needs of the customers and the challenges associated with meeting those needs. They studied the gaps in their service, balanced the needs of the customers with their ability to efficiently and effectively meet those needs and implemented the changes needed to achieve a successful outcome.

The team initially focused on four areas: lost films, delayed reports, priority bookings and patient waiting time.

They observed that it was a challenge for other areas within the hospital to return films to the Radiology Department when they were no longer needed. The Radiology team, therefore, designed a process to *collect these films daily* throughout the hospital and, at the same time, *deliver the reports* needed by the physicians in a more timely fashion.

They observed the anxiety that accompanied patients as they struggled with *lengthy delays for appointments*. The team therefore implemented *clinical pathways* to minimize these delays for high priority studies and implemented a triage system for handling urgent breast imaging requests and related breast biopsies.

They observed that the role of the radiologist was radically changing. The radiologist was performing increasing numbers of interventional procedures resulting in a lengthy delay for other patients awaiting the injection of contrast. A *certification program* was therefore designed by the team to enhance the skills of the Registered Technologist, within their scope of practice, to inject the contrast and *minimize patient waiting time*.

Quality improvement was not just a concept or a philosophy, but was an integral part of the work of this team and a fundamental catalyst for effecting the vision of the department and the organization. (See Appendix C for contact information.)



## A FOCUS ON CUSTOMERS

### INDICATOR MEASURE RESULTS

At the VON Toronto Branch there has been a focus on customers utilizing indicator measurement.

#### CLIENT SURVEY

Client survey data from 1997-98 indicated that:

- Fifteen percent (15%) of clients saw more than five nurses.
- Twelve percent (12%) of clients thought the *number of nurses* they had who provided care was too many.

Nurses in Care Team meetings indicated that both continuity and consistency were issues.

#### ANALYSIS

Discussion and analysis led to:

- Enhancement of Primary Nurse/Case Manager approach to care using primary nurse and small care teams
- Development of Case Management Guidelines and Education Package
- Development of continuity index to monitor success with continuity
- Opportunities for clinical education
- Focus of the Professional Practice Committee on continuity and consistency (Professional Practice Committee Goals)
- Development of Professional Practice Action Group to focus on "living" their client-focused philosophy, including consistency and continuity

#### OUTCOME

The above led to:

- Development of clinical case rounds in order to promote consistency of care and increase quality of care

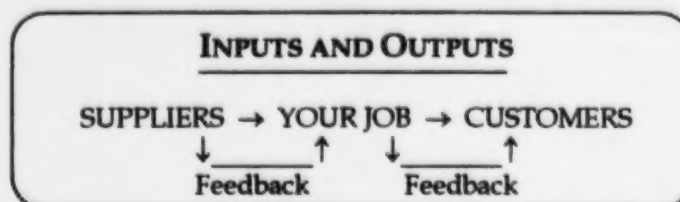
See Appendix C for contact information.



## SUPPLIERS

A supplier is an individual or group providing a product or service to either an internal or external customer. In relation to CQI, it is crucial to understand who suppliers are and what products or inputs they commonly supply to each customer or consumer.

In health care, these inputs can range from the abstract—a verbal query for information, to the concrete—a request for laboratory tests. As these inputs are passed on, they are transformed through processes that the individual or department controls. It is important, therefore, to identify all suppliers and the inputs, or products, they provide.



### *Internal and External Suppliers*

Suppliers can be both internal and external depending on the nature of the process in question. External suppliers are relatively easy to identify. A company that provides pharmaceuticals is a straightforward example of an external supplier.

Intimately linked with the notion of customer, the identification of all suppliers is paramount to understanding how an entire process works and can be improved to meet the expectations of customers. One's suppliers, therefore, will view the client as a customer of their efforts. If they are skilled in the CQI philosophy, they will initiate the communication process and teamwork that will permit the development of a product that meets the client's needs.

In an organization that is applying the CQI philosophy, such supplier/customer relationships are identified as processes that are always being examined for improvements. Effective identification of all links in a process provides an opportunity to bring all the key stakeholders of the process together to analyze how well it is working and whether or not improvement opportunities are available.

Customers (or potential customers) can be viewed as suppliers of feedback. For example, a community survey depends on local residents to provide necessary feedback on issues being polled. The community therefore becomes the supplier of the information or input.



## TOTAL CUSTOMER RELATIONSHIPS

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*Our values – respect, excellence and compassion – determine the ways we build relationships with patients, their families, diverse partners and the community. Values form the foundation on which we strive for quality through listening, learning and innovation. The positive and constructive actions which flow out of our values create an organization people are proud to be associated with.*

Clifford A. Nordal  
President & Chief Executive Officer  
St. Joseph's Health Centre, London, Ontario

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In the new millennium, how will we define the customer relationship in health care? What does the public really want? How can costs be contained as the demand for services increase?

*To succeed in the face of cost containment and other pressures, care providers must become customer-[patient] focused.*

— Berwick, 1997

Although these questions on the whole remain unanswered, health policies are reflecting the need for consumer involvement in health care decision making. Community development approaches have been applied across Canada as a strategy for involving consumers. Major breakthroughs in the involvement of consumers in areas such as mental health underscore the need to proceed with developments in this area. In turn, research efforts and service improvements are providing insights on how to further proceed.

Over the past decade the customer relationships concept in health care has evolved to the total customer relationship concept. Determinants of health, population health models, and best practices all support the move to a more eclectic approach to health care decision making (Health Canada, 1998).

The capability of health care systems to measure their own achievements, a precondition to improvement of those systems, requires the capability to see care through the eyes of the patients (clients, residents) who are served. Today, customer accountability includes reporting back to the community and asking, "How are we doing?"



### **Public Accountability**

A framework for those involved with governing is provided in the "Governance Check-Up: Guidance for Health Care Organizations" (CCAF-FCVI Inc. and CCHSA, 1998). This framework links important elements of information to governance accountability.

Challenges regarding public accountability and the development of meaningful measures are significant. In an American study it was reported that people have five concerns when they seek health care (Lansky, 1998):

1. *Staying healthy: Will I be able to stay as healthy as possible – through education, health promotion, preventive services, and early detection of disease?*
2. *The basics: Will I have access to needed services and will I be treated respectfully and understand what is said to me?*
3. *Getting better: If I get sick, will I get better and regain normal functioning?*
4. *Living with illness: If I suffer from a chronic condition will I be able to maintain the best possible functioning?*
5. *Changing needs: As I face death or disability in my family, will we be able to cope, minimize pain and suffering and maximize spiritual and family comfort?*

Measurement that assesses how well health care organizations meet each of the five areas is required.

---

*The methods of health care delivery have changed as a result of the restructuring process. Because of this, one significant challenge we face is ensuring "quality" in a managed competition environment. Success can only be achieved if all stakeholders in the provision of care focus first and foremost on the client.*

John Hassan  
Chief Executive Officer  
Haliburton, Northumberland and Victoria Access Centre  
Lindsay, Ontario

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## CUSTOMER PERSPECTIVES

Needs, challenges, and potential action steps for increasing the prominence of the user's perspective include:

- the concepts and definitions of quality
- the measurement of quality (Cleary and Edgman-Levitan, 1997)

### *Concepts and Definition of Quality*

Recent work on the definition and measurement of health care quality has resulted in the availability of a range of quality indicators that exceed, by a large factor, the number that any existing health system could implement and use. "Important criteria for making decisions about what subset of measures to develop and collect are the values and preferences of consumers. Unfortunately, not enough is known about these issues" (Cleary and Edgman-Levitan, 1997).

In Berwick's view, a central goal of providing information on the quality of health care is to bring the consumer into a "total relationship" with health care providers; a knowledgeable consumer is critical to this effort (1997).

The field of providing quality information to consumers of health care holds both promise and risk. Several steps may strengthen consumer information as a significant strategy to improve the health care of Canadians:

- ♦ Learn about consumer preferences and variations.
- ♦ Learn how to help consumers use services.
- ♦ Change consumer relationships with providers.
- ♦ Build an infrastructure of consumer-centred resources.

*Accountability and consumer involvement  
are the drivers behind change.*

— Berwick, 1996

### *Measurement of Quality - Patient Input*

To effectively use patient input to improve performance, an organization needs a systematic method for gathering, assessing, and using those data to improve old processes and design new ones. Using patient input to improve performance is not an isolated activity but should be linked in



the organization's strategic plan, as well as in its practice, to organization-wide efforts to improve performance (Joint Commission Journal on Quality Improvement, 1995).

### **Methods**

The following are common methods for obtaining patient feedback:

- focus groups
- critical incident method
- direct observation
- content analysis of letters and comments
- written surveys
- telephone surveys
- interviews
- archival studies

At a technical level, the measurement of functional status, pain, emotional well-being, social and role functioning, and target symptoms status is best done by asking patients themselves for reports and ratings (Berwick, 1997).

### **Considerations**

*In the last 10 years, patient satisfaction surveys have become one of the most popular approaches to gathering information about service quality. They are widely used, in part because of the intuitive appeal of asking healthcare customers about the quality of services they have received. It is generally taken for granted that the patient's perspective provides the correct perspective, since patients are the recipients of healthcare services. For a variety of reasons, this is only partly true.*

– Hirdes et al, 1998

Patients may be in a position to assess the interpersonal interactions they have with healthcare staff and the adequacy of communication with service providers; however, they have little technical expertise in assessing the adequacy with which clinical procedures are performed. Hence, the patient is in a position to assess only one aspect of the delivery of healthcare services, and that aspect may not be the most important one to consider in the case of those with acute or clinically unstable chronic conditions. (See Part Six - Evaluation, for further discussion on surveys.)



### THE PATIENT'S PERSPECTIVE

**Design:** Designing a process that uses patient input in performance improvement requires reviewing the patient groups served by the organization, the important clinical and organizational functions that affect patients, the dimensions of performance that affect patients in each function, and the possible methods for gathering and using patient input.

**Measure:** The measurement method varies depending on the process, patient group, diagnosis, or other subject being measured. Any plan for measurement, including one for gathering patient input, should address the following questions: What data will be collected? Who will be involved in the collection? When, where, and how will the data be collected?

**Assess:** Raw data cannot be the basis for improving performance but must be carefully assessed to provide information about current performance, identify opportunities for improvement, help set priorities, and help identify root causes of problems that can lead to improvement.

**Improve:** Whether using patient input to design a new process or to redesign an existing process, the goal is to translate patient input into specific characteristics (key quality characteristics) that can be addressed by the improvement plan. Once a new or redesigned process has been implemented, teams must measure its effect. This measurement often involves going back to patients and collecting feedback to see if the process is meeting their needs and expectations, usually through a written or telephone survey. To develop an instrument to measure satisfaction, staff can return to the specifications and indicators they developed based on patient needs and expectations.

— Joint Commission Journal on Quality Improvement, 1995



## PATIENT SATISFACTION SURVEY: AN EXAMPLE

### ONTARIO'S HOSPITAL REPORT '99

#### *Measures of Patient Perceptions of Hospitals*

This survey's purpose was to determine "Quality of Hospitals" from the patient's perspective.

The indicators of hospital quality from the patient's perspective were:

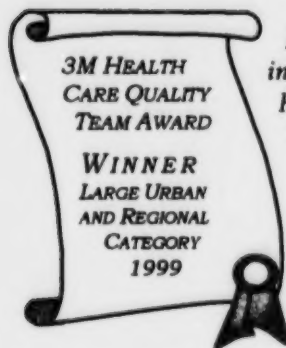
- Global quality
- Process quality
- Outcome
- Nursing care
- Physician care
- Ancillary patient care staff
- Support services
- Housekeeping
- Coordination of care
- Continuity of care

Baker GR et al. *The Hospital Report '99*.  
*A balanced scorecard for Ontario's acute care hospitals*.  
Toronto: Ontario Hospital Association, 1999.



## **AGING PROGRAM WORK TRANSFORMATION PROJECT**

**Sunnybrook Health Sciences Centre  
Toronto, Ontario**



In 1996, a work transformation project was initiated in the Aging Program at Sunnybrook Health Sciences Centre\*. Sunnybrook is an 1,100-bed teaching hospital affiliated with the University of Toronto. A 45-bed veteran unit in the long term care section of the hospital was selected as a suitable environment for initiating the work transformation activities. The unit had a mix of both male (20) and female (25) veterans.

One of the major driving forces for the project was the corporate direction to implement patient focused care (PFC). The goals of the project were to improve the quality of clinical care and services, to facilitate improvements in support processes, to enhance the quality of work-life, and to decrease costs. The aim was to transform work by analyzing and redesigning the core processes of patient care and changing the care delivery model. A more home-like environment was created to address the concerns identified in the patient satisfaction survey. Benefits and improvements realized would be implemented on other patient care units within the Aging Program.

In 1992 Sunnybrook Health Sciences Centre, like many other hospitals in Ontario, orchestrated a large-scale organizational change focusing on innovative approaches to the way care was delivered and work carried out. The transformation was driven by the president and chief executive officer and a strong senior management team. The hospital's structure was reorganized and decentralized to reflect a new philosophy of care-Patient Focused Care-based on the work of Booze Allen Health Care Incorporated. The concepts include:

- Reorganizing the structure and care delivery model to focus on continuity of patient care
- Decentralizing patient services to the point of care
- Increasing the proportion of direct care activities as compared to infrastructure work

\* The name was changed to Sunnybrook & Women's College Health Sciences Centre in 1998 due to legal amalgamation.



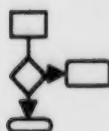
- *Multi-skilling staff so that they can assume multiple roles and reduce fragmentation*
- *Tailoring operating needs to specific groups of patients*
- *Empowering staff to plan and execute their work in ways most responsive to patient needs*

*At Sunnybrook, Patient Focused Care evolved to include an emphasis on patients guiding decisions about care and service.*

See Appendix C for contact information.



## PROCESSES



Modern health care organizations are highly complex workplaces involving many individuals with different skills and responsibilities for a wide variety of activities. When organizations first analyze how work is done, they are usually surprised by its complexity. A work process has many steps and frequently involves different clinical disciplines and several departments. Routine yet important work processes may have 30 or 40 steps, involving people from five or six different departments and clinical disciplines. Such processes are rarely deliberately designed; rather, they evolve. Because no individual knows the entire process, there are often redundant and unnecessary steps. Changing the process is a constant challenge that requires negotiation and coordination between managers and their respective staffs in multidisciplinary departments. These processes take time, hence may delay attainment of objectives. No wonder that one of the challenges for hospitals is to decrease the number of people waiting in admitting areas and emergency rooms.

A brief description of the admitting process illustrates the complexity and challenge of improving a work process. Patients who enter hospital via the emergency room may have interactions with nurses and physicians who assess their clinical status, phlebotomists who take blood samples, clerks who gather information for patient records, transport staff who escort them to their rooms, and nurses on the receiving unit who reassess their current status and ensure that their room is ready. Other staff in the laboratory, housekeeping and elsewhere perform additional essential tasks necessary to make decisions about whether the patient should be admitted, to what service and physician the patient should be assigned, and what additional services may be required to meet the patient's needs. Given the complexity of such processes and the variety of tasks required, significant variation may occur. Even when all the steps occur without problems, the process often takes a long time. It is not surprising, therefore, that many patients are dissatisfied with long waits for hospital beds, staff are frustrated, and these inefficiencies result in added costs for the hospital.

Traditional management approaches to improving work are based largely on trial and error—the selection of solutions without sufficient study of the underlying causes. Not surprisingly, most such attempts either fail to improve outcomes or result in small improvements at the expense of greatly increased costs. The changes made often have unintended results;



thus, today's solutions become tomorrow's problems. As organizations attempt to cope with increases in the volume of patients and the complexities of delivering health care, their staff face an expanding spiral of problems. Managers are caught in unending circles of "firefighting."

There are several deficiencies in traditional approaches to solving problems.

- ◆ Lack of real staff involvement, with no provision for individual members to maximize their work within the context of understood goals:
  - Managers act without involving staff who have crucial knowledge about why the problem exists.
  - Staff are reluctant to reveal why things go wrong, lest they be blamed for not working effectively.
- ◆ Changes are blocked because of resistance from staff or managers in other areas.

Although it is human nature to blame others for things that go wrong, W. Edwards Deming (1986) notes that, in most cases, the source of problems lies not with individuals who are incompetent or wilfully negligent. Rather, the source is often the complexity of work processes and the lack of understanding how to improve them.

Making improvements to processes requires better understanding of how work is done. Frontline staff must be involved in this effort. A problem solving process needs to be developed that allows workers and managers to solve problems across departmental and functional areas. Most problems in work processes occur in the "handoffs" between different steps of a process. In Admitting, for example, a patient may wait in the Emergency Room even though a bed is available, because there is no one to transport the individual to the room, or a decision to admit may be delayed because a laboratory result is not available. The root cause can be traced to a system problem.

Quality improvement offers an alternative model for addressing work problems. In quality improvement, frontline employees use a variety of analytical tools to gain an understanding of the processes of work. Team members gather data to identify the root causes for problems in these processes, then they design and carry out small-scale experiments to improve this work. (Further discussion of teams occurs in Part Three.)



## PROCESS IMPROVEMENT RESPONSIBILITIES

Responsibility for these activities is typically shared among management and other key leaders working in a "Quality Council" or similar forum, and the staff who will carry out the process improvement work. The team and the quality council are each responsible for specific steps in the quality improvement process.

Involvement of management on the quality council ensures that:

- ◆ The selected projects focus on key organizational processes that will have important benefits in improving customer satisfaction.
- ◆ The necessary resources are provided to the team members to carry out their work.
- ◆ The results of the team's work are implemented.

The team takes responsibility for the following:

- analyzing the work process
- designing the improvements
- testing their feasibility and impact

One model for the quality improvement process is the FOCUS-PDCA Model developed by the Hospital Corporation of America.

<b>F</b>	<b>Find</b> a process to improve.
<b>O</b>	<b>Organize</b> a team that knows the process.
<b>C</b>	<b>Clarify</b> current knowledge of the process.
<b>U</b>	<b>Understand</b> sources or variation.
<b>S</b>	<b>Select</b> the improvement.
<b>P</b>	<b>Plan</b> the improvement and continued data collection.
<b>D</b>	<b>Do</b> the improvement, data collection and data analysis.
<b>C</b>	<b>Check</b> and study the result.
<b>A</b>	<b>Act</b> to hold the gains, continue improving.



The first steps in this process involve the identification and selection of a problem that is tied to a work process. Staff who understand the process are selected to form a quality improvement team.

The team then seeks data to broaden their knowledge of the process. With this knowledge in hand, the team generates ideas about possible root causes of problems in the process. Their work at this point is oriented toward developing theories that explain why the problem exists. After selecting one or more theories, the team collects data to test these theories.



Once the root cause of the problem is identified, the team then works to select possible improvements. They brainstorm to identify countermeasures and select the most promising of these measures for testing.



These countermeasures are then employed in small-scale trials, and data are collected to examine their effectiveness.



The team analyzes the data to determine if the countermeasures were successful. If so, the team implements changes accordingly, and designs ongoing data collection to ensure that the improvements are maintained.

## PROCESS CHANGE

The outcomes of health care work are caused by process and methods which interact in a specific place and sequence influenced by individual patient needs.

To help understand the magnitude of change required one must fully understand patients' needs and the health care processes involved. This model helps to "see" the relations between and among the elements (Batalden, 1996, 1998).

The following is an example of a clinical improvement project for patients undergoing total hip replacement surgery.



### CHANGING A PROCESS

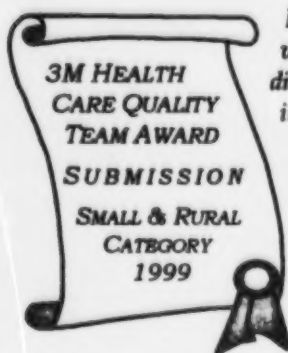
1. **Modify input.** Increase the ability of the patient to successfully withstand the intervention and recover more quickly by operating on "fit" patients.
2. **Combine steps.** Decrease the work and waste associated with doing things as multiple steps by combining the steps.
3. **Eliminate failures at hand-offs between steps.** By making the egress from one step become the explicit ingress to the next, the "coupling" of steps can occur with fewer errors, such as redesigning the format of discharge planning forms and orders for admission to home health and follow-up physical therapy care.
4. **Eliminate a step.** Stop doing things that do not add significant value to the desired result.
5. **Reorder the sequence of steps.** By placing a late-coming step in an earlier position in the process, achieve a smoother overall flow of the care, such as having the physical therapist teach patients to manage their own postoperative rehabilitation care before admission—when they are alert and ready to learn.
6. **Change an element in the process by creating an arrangement with another party (customer, supplier, other) to change the concept of the process.** By combining a step with something extrinsic to the current process, it is possible to create a new possibility altogether, such as combining discharge from acute care with admission to a transition care setting, thus making the discharge step into a transfer step and the entire process into one of hip replacement and rehabilitation.
7. **Replace a step with a better-value alternative.** Identify a better method or technology to perform a given step, such as the use of a decision algorithm for prosthesis selection that results in a recommendation for the least costly, clinically appropriate device.
8. **From knowledge of service or product that is produced, redesign production.** Redesign the process once the full nature of the result and its possible contributors are known, such as creating optimal nutritional status prior to surgery after recognizing the value of good nutritional status for prompt healing.
9. **From knowledge of use of service/product, redesign service/product.** Knowing the next uses of the end result of the process allows consideration of further process changes such as the creation of a flexion-permitting incision for a hip joint replacement after recognizing the need for early ambulation.
10. **With knowledge of need and aim, redesign.** If the need is clearly known, entirely different services can be considered and designed (for example, when the need for pain relief is clarified as the purpose of the intervention, alternative approaches to achieve that aim with or without the intervening surgery could be developed).

(Adapted from Batalden, Mohr et al, 1996)



## BREAST HEALTH : NAVIGATING THE JOURNEY FROM DISCOVERY TO DIAGNOSIS

*Saint Mary's Hospital  
New Westminster, British Columbia*



Each year in British Columbia (BC) 2,600 women develop breast cancer. About 600 will die annually from this disease making it an important health issue for BC women.

Recognizing that early diagnosis and treatment of breast cancer saves lives, several physicians initiated the idea of a breast clinic in the Simon Fraser Health Region (SFHR). Their vision was to provide more comprehensive diagnostic and treatment services for women with breast disease.

Approval was given to proceed at Saint Mary's Hospital, an acute care facility that had already invested heavily in diagnostic and surgical infrastructure to support this type of program. Perhaps more important to the success of this new venture, however, was the expertise and commitment of the interdisciplinary team who accepted the challenge of making the vision a reality.

The first problem the team chose to tackle was the lengthy waiting period women experienced between first discovering a breast abnormality and receiving a diagnosis. Provincial data showed that the average time from abnormal mammography to definitive diagnosis was nine weeks. The team set an ambitious goal of reducing this timeframe to 18 working days. Strategies implemented to achieve this target included strengthening communication with physicians, refining the booking and referral process, organizing patient flow and clinic setup to accommodate patients efficiently, and adding staff to process dictated reports more quickly. Patient education packages were developed and teaching of breast self-examination was initiated. Each member of the team played a vital role, collaboratively and individually, in making these improvements.

An approach was implemented whereby the various disciplines came together one day a week to offer a rapid diagnostic service. It was evaluated for a six-month period. The result was that 75% of the women had a definitive diagnosis within the target of 18 days, a significant improvement over the provincial average. Four other measurements, a pre- and post-clinic questionnaire for patients, a



physician survey, and a formative evaluation involving staff, demonstrated that all were generally satisfied with the clinic.

Further refinements were necessary for the 25% of patients who did not receive a definitive diagnosis within 18 days. A program change was made to provide the option of fine wire localizations in Ambulatory Care rather than a long wait for surgical time in the main operating room. A retrospective review in January 1999 showed that, while every patient requiring fine wire localizations did not achieve definitive diagnosis within 18 days, there was a reduction in the maximum amount of time women waited.

Opportunities to fully meet the needs of women with breast disease will continue to be explored and refined. It is a process that requires knowledge, experience, compassion, dedication, and perseverance. I am proud of what this team has achieved and know they have the zeal and commitment to continue helping women navigate the journey from discovery to diagnosis – and beyond.

See Appendix C for contact information.



## PDSA - A MODEL FOR LEARNING

### *Supporting Clinicians*

Berwick advises that, in many circumstances, the most powerful way to make improvements is to conduct small, local tests—Plan-Do-Study-Act (PDSA) cycles—in which one learns from taking action. Learning in these cycles has much in common with learning from prudent clinical work, in which therapies are initiated under close observation and adjustments are made as data and experience accumulate. The strong rationale for the use of PDSA cycles in the process of improvement comes largely from systems theory. "A *system* is a set of interdependent elements interacting to achieve a common purpose. Bicycle riding is a system; so is care of a patient with asthma" (Berwick, 1998).

*Improving the  
daily practice of  
medicine  
requires making  
changes in  
processes of care.  
— Berwick, 1998*

For many system improvements, PDSA cycles are more appropriate and informative than either formal studies with experimental designs (such as randomized trials) or the mere implementation of changes without reflection or evaluative measurement. Physicians can encourage systemic improvement by endorsing and participating in prudent, local tests of change in the health care organizations where they work.

Small tests of change can be conducted in everyday clinical practice, thereby turning the health care delivery team into reflective practitioners who can learn from, and improve on, their work.

*The science in PDSA is  
the act of reflection,  
learning from what one  
did.*



### CLINICAL IMPROVEMENT WORKSHEETS

The Clinical Improvement Worksheet has been designed as a simple tool that front line practitioners can use to blend clinical improvement work with their core clinical delivery process. The worksheet provides a graphic, flexible tool for helping clinicians make improvements and offers a simple format for teams to visualize their path forward, record their progress, and share their work in a standard format.

- ◆ Helps the clinical team get ready to make a change and begins the process of taking aim by honing in on a high-leverage area for testing a change—after having had the opportunity to discuss desired outcomes, care processes, and potential changes.
- ◆ Provides a picture that blends "improvement thinking" with the core clinical process in a way that is easy for practitioners to understand and tailor to their patient care delivery routines

—Nelson, Batalden et al, 1996

This clinical improvement model has been applied to community health and the worksheets have been adapted for community improvement.

—Speroff et al, 1998



## SYSTEMS IMPROVEMENT

*The contemporary quality improvement approaches confront problems that exist addressing organizations as systems.*

— Batalden, 1998

### VIEWING THE ORGANIZATION AS A SYSTEM



"Efforts to raise the important issues within an organization and to develop and implement changes related to these issues must be continuous, coordinated, and focused on the organization's common purpose. To accomplish this, an organization must recognize itself as a system and operate as a system. A system is an interdependent group of items, people, or processes with a common purpose" (Langley et al, 1996).

The "systems view" is an important way for leaders to think about their organizations. Different departments, people, equipment, facilities, and functions make up an organization. A leader's job is to *integrate* these diverse components so that they accomplish the common purpose of the system. Ultimately, the success of an organization will depend on this integration (Langley et al, 1996).

Improvement results from new structures that are purposefully designed. To achieve improvement, people must look beyond their own professional or organizational identities and see themselves as part of the larger system. Understanding the structures and dynamics of systems combined with clinical knowledge can equip staff to collaborate with colleagues in order to diagnose faults of a system and design remedies (Nolan, 1999).

Senge, Kleiner et al (1994) promote a systems view, and describe systems thinking as "a way of thinking about, and a language for describing and understanding, the forces and interrelationships that shape the behaviour of systems. This discipline helps us see how to change systems more effectively, and to act more in tune with the larger processes of the natural and economic world."



### BUILDING THE SYSTEM OF IMPROVEMENT

Many things must happen if an organization is to continually make changes that lead to improvement from the viewpoint of the customer. Establishment of a system of improvement to provide a framework for leading change is a high priority. Five key activities can be used by leaders:

1. Establishing and communicating the purpose of the organization
2. Viewing the organization as a system
3. Designing and managing a system to gather information for improvement
4. Conducting planning for improvement and integrating it with business planning
5. Managing individual and team improvement activities

— Langley et al, 1996

### *Understanding the Structure and Dynamics of Systems*

A system may be defined as a collection of interdependent elements that interact to achieve a common purpose. Examples of diverse systems include the process of treating patients with diabetes, a hospital, the development and testing of new medical procedures, or a medical practice (Nolan, 1999).

Deming's management theory is derived from an application of what he called a system of profound knowledge. Profound knowledge requires an understanding of a system, variation, psychology, and a theory of knowledge. If one views a business as a system, it is essential to have an understanding of systems and their variations. Further, in a system where customers are the most important component, knowledge of psychology is also required. Deming believed that almost every act of management requires prediction; therefore, an understanding of a theory of knowledge is also necessary (Roehm and Castellano, 1997).

*Understanding and managing toward existing customer expectations means having both the will and the way. You and your team must first decide that your customers' expectations and perceptions of the value they receive from you is a key driving force in your business. Then you need to systematically turn soft customer expectations and perceptions into hard, manageable data. That calls for the discipline of a rigorous management system and process.*

— Clemmer, 1995



### ***Key Principles Related to Systems***

Nolan (1999) describes the following key principles of systems:

- **A system needs a purpose to aid people in managing their interdependencies.**
  - The structure of the system follows from the purpose. The purpose of a system and the aims to improve it are, in turn, based on value judgements.
  - New knowledge, new therapies, and changing economic forces dictate that existing systems must undergo continual improvement if those systems are to fulfil the unswerving purpose of obtaining the best outcomes for patients.
  
- **The structure of a system significantly determines the performance of the system.**
  - Systems may have flawed structures. Improvements in these systems are then related to changing to more effective structures.
  - Persons who do not understand how the structure of a system affects its performance will often propose a solution that is more of the same: more money, more people, more checking, more equipment, or more rules. If improvements occur as a result of these changes, they are usually costly or short-lived.
  
- **Changes in the structure of a system have the potential for generating unintended consequences.**
  - A systems perspective recognizes that unintended consequences are a predictable result of changing systems. Persons who are interested in the improvement of medical care take this fact as a caution for intelligent change, whereas persons who are interested in maintaining the status quo use it as an excuse to resist change.
  - Intelligent change is guided by sound theory, research, or other empirical evidence and is tested first on a small scale by using a balanced set of outcome measures.
  - Unintended consequences should be distinguished from known side effects or tradeoffs, such as hair loss from chemotherapy, that are tolerated because the net outcome is viewed as positive.



● **The structure of a system dictates the benefits that accrue to various people working in the system.**

- From a systems perspective, improvement requires many parties to change.
- A redesigned system may be an improvement overall, but it may change the nature of the benefits for some persons. Successful change requires negotiation.

● **The size and scope of a system influence the potential for improvement.**

- The size and scope of a system are determined by the elements that are included in the description of the system.

● **The need for co-operation is a logical extension of inter-dependencies in systems.**

- Once people acknowledge their interdependencies and affirm the existence of a common aim, they recognize the need to co-operate.

● **Systems must be managed.**

- Simply declaring a group of elements a system does not mean that it will function as a system. The interdependencies must be managed, especially after a change to a system. For example, the standard process for ordering laboratory tests and having the results in patients' charts in a timely manner will deteriorate without vigilant management.

● **Improvements in systems must be led.**

- Improvement of a system requires changes to its structure. A leader is needed to overcome the inertia in the present system and provide the will for change. For example, primary care physicians and specialists will not come together spontaneously to design a new referral system.

**LEVERAGE  
POINTS**

*Not all aspects of a structure need to be changed to obtain significant improvement. Well-focused, intelligent changes can sometimes produce substantial, enduring results. Systems theorists refer to these sensitive elements of the structure of a system as leverage points or triggers.*

— Nolan, 1999



## IMPROVEMENT AND CHANGE

*To survive, health care systems must be able to improve. Learning about making and encouraging change, managing the change within and across organizations, and learning from the changes tested will characterize the sustainable, thriving health systems of the future. Setting goals was once enough, but it is clear that goals must be coupled with the concepts and specific methods to produce sustainable change.*

— Batalden, Mohr et al, 1996

Batalden and colleagues suggest an approach to improvement based on the following "fundamentals":

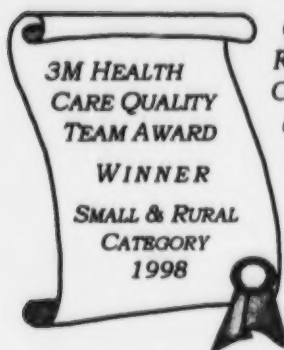
- ◆ **Aim for better value:** A common aim for the improvement of health and the reduction of the burden of illness in patients' lives, for example, excess mortality, morbidity, dissatisfaction, cost, and suboptimal functioning in daily life
- ◆ **Systems thinking:** An understanding of the overall system of care within which the desire for change may arise
- ◆ **Cultural mindedness:** An awareness of the habits, traditions, policies, and values which promote or impede taking the risk of introducing change
- ◆ **Management of change:** A grasp of the tension and pressure needed to promote change, the creation of a customized and locally sensible, actionable alternative to the status quo, the skills and knowledge necessary to execute the change, and the social support required for sustaining the change efforts
- ◆ **Clinical improvement model:** An understanding of a flexible, basic format such as the Clinical Improvement Worksheet and the PDCA cycle, for thinking about outcomes, the underlying process, designing new processes, and testing changes (Batalden, Mohr et al, 1996)

*To  
survive,  
health  
care  
systems  
must be  
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improve.*



## THE CASTLE DOWNS HEALTH CENTRE

### CAPITAL HEALTH/STURGEON COMMUNITY HOSPITAL AND HEALTH CARE



On November 4, 1996, the Capital Health Region established the Castle Downs Health Centre as a model of integrated health services, combining community health promotion/preventive services and specialty medical services under one roof.

The Castle Downs project was planned and implemented by a team of health care providers from diverse service areas, with input and participation by a broad range of internal and external stakeholders. The commitment of the team to continuous quality improvement is evident in the innovative way in which they have redesigned services in Castle Downs, and from their clear focus on meeting client needs. The team has:

- honoured and advanced the vision and mission of the Capital Health organization
- overcome challenges to team performance, formed an effective working group, and involved a wide range of stakeholders
- utilized demographic data, needs assessments and community input to design a health centre which meets the needs of the Castle Downs community
- successfully planned and implemented a health centre which integrates a number of traditionally distinct sets of health services
- improved access to services for the Castle Downs community
- created a continuum of care which has improved the quality of services available to the Castle Downs community
- developed a health centre which can serve as a model in planning future integrated services

The Castle Downs team has created an integrated, accessible and affordable model of health services, and has done so in cooperation with one of our key partners – the community. In their efforts to improve the quality of health services in Castle Downs, the team has taken a concrete step towards the Capital Health vision of “healthier people in healthier communities.”

See Appendix C for contact information.



### GUIDELINES FOR GAINING COMMITMENT TO CHANGE

The following guidelines have proved useful in helping people minimize resistance to change and obtain the desired commitment of those affected by the change:

1. Provide information on why the change is being made:
  - ♦ Empathize with the anxiety created by the change (but do not expect to eliminate it).
  - ♦ Show how the change supports the purpose of the organization.
  - ♦ Put the change in historical perspective.
  - ♦ Link the change to the outside customer.
  - ♦ Reframe the change as an exciting opportunity, not something being forced on people.
  - ♦ Provide a special hot line for recording questions and comments during implementation.
2. Provide specific information on how the change will affect people:
  - ♦ Use the results from the testing cycles to share visual displays of data and test results.
  - ♦ Be prepared to discuss questions, requests for clarification, or ideas about the change.
  - ♦ Study rational objections to the change and be prepared to address them.
  - ♦ Include in presentations representatives from the organization who actually carried out the tests or implementation.
3. Get consensus on solutions, resources, and other necessary support to implement the change:
  - ♦ Decide on a plan of action with defined milestones and dates.
  - ♦ Ask leaders and key people in all parts of the organization to publicly show their support.
  - ♦ Express confidence in the ability of those who must carry out the change.
4. Publicize the change:
  - ♦ Use symbolism (stories, analogies, pictures, staged events).
  - ♦ Summarize all key points and agreements as they are made.
  - ♦ Show appreciation for the efforts of everyone who was involved in the development and testing of the change.
  - ♦ Take advantage of significant events and tie the implementation of the change to these events.

Following these guidelines will help organizations to overcome most people's resistance to change.

(Adapted from Langley et al, 1996)



## IMPROVEMENT & CHANGE: LEARNING POINTS

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*Any would-be leader of improvement must recognize the indissoluble bond between improvement and change.*

- ◆ *Not all change is improvement, but all improvement is change.*
- ◆ *Real improvement comes from changing systems, not changing within systems.*
- ◆ *To make improvements we must be clear about what we are trying to accomplish, how we will know that a change has led to improvement, and what change we can make that will result in an improvement.*
- ◆ *The more specific the aim, the more likely the improvement; armies do not take all hills at once.*
- ◆ *Concentrate on meeting the needs of patients rather than the needs of organizations.*
- ◆ *Measurement is best used for learning rather than for selection, reward, or punishment.*
- ◆ *Measurement tells us whether innovations should be kept, changed, or rejected; to understand causes; and to clarify aims.*
- ◆ *Effective leaders challenge the status quo both by insisting that the current system cannot remain and by offering clear ideas about superior alternatives.*
- ◆ *Educating people and providing incentives are familiar but not very effective ways of achieving improvement.*
- ◆ *Most work systems leave too little time for reflection on work.*
- ◆ *You win the Tour de France not by planning for years for the perfect first bicycle ride but by constantly making small improvements.*

— Berwick, 1996



## A MODEL FOR IMPROVEMENT

*To create great health we must create great systems of care for health. Improvement begins in our will, but to achieve improvement we need a method for systemic change, a model for improvement that is broad enough to capture the characteristics of delivery systems that emphasize the importance of processes while others focus on and emphasize outcomes.*

— Berwick, 1996

A simple and elegant model for achieving changes that are improvements has been devised. The model comprises three basic questions and a fourth element that describes a cycle for testing innovations.

1. *What are we trying to accomplish?* Improvement must be intended; specific aims are crucial.
2. *How will we know if a change leads to an improvement?* Improvement cannot act without measurement. This is measurement for the purpose of learning.
3. *What changes could we make that we think will result in improvement?* This question addresses the central law of improvement. New aims require changes of systems. It is essential to identify promising changes and to avoid useless ones. (Berwick, 1996, 1998, Nelson et al, 1998).

### TWO SIDES OF THE SAME COIN



Measurement and improvement are two sides of the same coin.

The connections are evident in the model for improvement.

The Plan-Do-Study-Act (PDSA) cycle describes, in essence, inductive learning—the growth of knowledge through making changes and then reflecting on the consequences of those changes. Such inductive learning is familiar to scientists, but such formal cycles of action and reflection are unusual in daily work. This model intends that testing change in informative cycles should be part of normal daily activity throughout an organization.

### Challenges

It is not easy for leaders who intend to induce productive change. Four simple steps—set aims, define measurements, find promising ideas for change, and test those ideas in real work settings—"challenge the nettle of the best and push against many deeply held assumptions" (Berwick, 1996).



### ELEMENTS THAT LEAD TO PROGRESS

*"It is usually easier to defend the status quo than to change it."*

1. **Aim.** Capable improvers answer the question: "What are we trying to accomplish?" They do not regard improvement as an accident; they intend it.
2. **Measurement.** Capable improvers answer the question: "How will we know whether a change is an improvement?" If they are learning to play golf, they watch to see where the golf ball went. If they want to reduce costs without harming patients, they track both costs and harms.
3. **Ideas for change.** Capable improvers identify plausible alternatives to the status quo. They answer the question: "What change can we try that we believe will result in improvement (as defined by aim and measurement)?" They do not have one source of such ideas, they have many, including good theories, the observations of experts, communication with others, analysis of their own history, and the ability to harvest ideas from others, such as employees, partners, and those whom they serve.
4. **Testing.** Capable improvers move promptly to test real changes on a small scale, then adjust their actions according to what they learn from these tests.

(Adapted from Berwick and Nolan, 1998)

Leaders cannot simply "empower" people to discover better ways to work. In practice, the workforce rarely comes up with a new concept bolder than one that leaders have already put on the table as the alternative to the status quo (Berwick, 1996).

The science in PDSA is in the act of reflection, learning from what one did.



## MEASUREMENT



How will one know whether a change is an improvement? The short answer is simple: collect some data on baseline performance, plot the data over time (preferably on a process control chart), start a test of change, and see whether the control chart shows a substantial improvement after the start point for the change (Nelson et al, 1998).

### *Use Data to Support Improvement*

The following are approaches to using data for improvement:

- ◆ Begin with curiosity about outcomes or a need to improve results.
- ◆ Propose solutions that are practical, goal-oriented, and good enough to start with.
- ◆ Gather baseline data on a small sample and check the findings.
- ◆ Try to change and improve the delivery process while gathering data.
- ◆ Plot results over time and analyze them by using a control chart or other graphical method.
- ◆ Refine your understanding of variation in processes and outcomes by dividing patients into clinically homogeneous subgroups (stratification) and analyzing the results separately for each group.
- ◆ Make further changes while measuring key outcomes over time (Nelson et al, 1998).

In changing the system of care, five principles can help guide the investment of energy:

1. Focus on integrating experiences, not just structures.
2. Learn to use measurement for improvement, not measurement for judgement.
3. Develop better ways to learn from each other, not just to discover "best practices."
4. Reduce total costs, not just local costs.
5. Compete against disease, not against each other (Berwick, 1994, 1996).

*... to achieve  
improvement  
we need a  
method for  
systemic  
change....*



## IMPROVING SYSTEMS

Specific areas of knowledge relevant to the improvement of systems include:

1. **The System.** The key organizing concept for an effective approach to improvement is the nature of a system (Nolan, 1999).
2. **Measurement.** Successful improvement requires facility in the measurement of progress toward aims, of the needs and status of patients and other consumers of care, and of local process characteristics that may be related to aims (Nelson et al, 1998).
3. **Leadership.** Organizing a system for improvement depends on effective leadership and sophisticated understandings among clinicians about why and how they can assist organizational leaders (Reinertsen, 1998).
4. **Tests of change.** The model for improvement requires tests of change in action, known in the quality improvement field as Plan-Do-Study-Act cycles (Berwick and Nolan, 1998).
5. **Co-operation.** Because system performance is closely tied to interactions and interdependence, effective improvement requires a high degree of cooperation (Clemmer et al, 1998).



# RESHAPING THE ORGANIZATION



PART THREE







## *Overview*

*Reshaping the organization presents a number of facets of quality management: leadership, culture, learning, teams, and empowerment. It outlines a management philosophy and practice based on Continuous Quality Improvement principles, integrating them to provide a design that will guide health care organizations to progress into the new millennium.*



### CHARACTERISTICS OF OUTSTANDING ORGANIZATIONS

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- ☑ Intense and consistent focus on customer needs
- ☑ Explicit design and management of processes and systems
- ☑ Widespread use of information to track work and its output
- ☑ Substantial employee involvement in designing, reviewing, and improving work
- ☑ Broad understanding of key organizational strategies, including the implications for operating units
- ☑ Consistent leadership attention to defining and communicating the organization's aim and strategies, supporting an open culture, and aligning diverse activities

(Adapted from Kinney and Gift, 1997)



# LEADERSHIP

*The primary purpose of power is not to use it but to share it. A special kind of power develops when it is shared, as compared to when it is used.*

— DePree, 1999

## LEADERSHIP: INTO THE NEXT CENTURY



The need for leadership in health care continues to be crucial for the future of our health care system. What kind of leadership will be needed to guide us into the new millenium?

In the 21<sup>st</sup> century, it is evident that a new form of leadership means something substantially different than in the past. Many leaders are rethinking their philosophy and altering their behaviour to be consistent with this new thinking.

Today, leaders of health care organizations face an unprecedented set of challenges. The public has concerns regarding today's health care system, and believes that the system needs major changes. Leaders must realign the organization functionally and structurally to achieve new requirements for health care. Traditional management of hierarchies, policies and guidelines, which are provider-driven as opposed to customer-driven, need to be replaced with dynamic, nimble organizations that meet the evolving needs of patients, communities and those who deliver health care services.

To achieve a total quality management vision and strategy throughout an organization, leaders must learn how to design organizations capable of generating and managing change. The demands of quality management focus everyone in the organization on processes, customer needs, investment in people, and the development of new knowledge, skills and innovative approaches. Leadership with this vision enables the organization to work.



### ***Practices of Leaders***

Kouzes and Posner, co-authors of the *Leadership Challenge* (1996), present compelling research to demystify the idea that leadership is not a position, rather a process. They advocate that leadership is an observable, learnable set of practices. These practices include: challenging the process; inspiring a strong vision; enabling others to act; modeling the way; and encouraging the heart.

- *Challenge the process*

Challenging the process means challenging the status quo to enable people and the organization to become better at what they do. This requires risk and permitting others the same, if not greater, opportunities.

- *Inspire a vision*

Inspiring a shared vision is a vital attribute and one that helps the leader excite others in the work needing to be done. It makes possible what can be. "Leaders cannot command commitment, only inspire it."

- *Enable others to act*

Leaders enable others to act. To cause and make possible the changes necessary in today's even more complex health care organizations, people must feel included and be capable of making changes and realignments. Clarity of the vision and values provides the framework for enabling others.

- *Model the way*

Leaders reinforce the meaning "to serve others." This is a foundation for empowering others. When leaders *model the way*, it is seen as commitment. People see the leader leading. Leaders set themselves as an example, deliver what they say they will and hold others to the same. By being focused and disciplined, leaders model the way through personal example and dedicated execution.

- *Encourage the heart*

Encouraging the heart means having passion for what you are, what you are striving for, and what the organization is about. It gives life and breath to an organic entity—the vision of a new organization. Kouzes and Posner also advocate the need for enjoyment and love of one's work.



## THE ROLE OF LEADERS

The challenge of leading an organization on a journey of quality improvement requires significant knowledge, skills and often a change in attitude. The role of the leader is vital to the success.

*The art of leading improvement requires a leader to have the ability to think about the many combinations of people, processes, customers, suppliers, and other factors in a system and how those ingredients can be integrated to help an organization achieve its purpose, strategic goals, or vision. Leaders who can think holistically in this fashion, who can communicate and persuade others, can accelerate improvement in their organization. Each leader will need to adapt this role to his or her own style, situation, and inclinations. Playing the role will require theory, vision, personal drive, and a practical plan.*

— Langley et al, 1996

### **Leaders Promote Learning**

The organizations that will fare best in the future (Senge 1990, Senge et al, 1999) will be those that have a relentless commitment to learning, along with the strength to resolve past issues and develop confidence in themselves and others. For today's leaders, implementing a continuous quality improvement strategy requires an unquenchable thirst for learning throughout the organization. In order to become better at what they do, and to reflect quality improvement in their own behaviours, leaders must "unlearn" some of their most basic management attitudes derived from the past.

The traditional "command and control" styles of leadership of the industrial era are now giving way to approaches more appropriate to the knowledge-based economy and the concept of the learning organization.

The organization of the future requires a culture where:

- Learning is a constant.
- Coaching and feedback are pervasive.
- Growth, performance, and self-esteem are supported (Sethi, 1997).

CQI means that the organization is empowered to "grow up." The parent-child model gives way to more mutually rewarding relationships emphasizing collegiality and collaboration. There must be no "secrets" or purported leaders deciding when staff can "handle



the difficult choices." The organization must learn, unlearn and teach together.

Leaders free themselves to become more the servant of the organization and less self-serving. The focus on those served, which is at the heart of CQI, presupposes the "leader as servant" model. This form of leadership helps the organization achieve the systematic changes needed to implement CQI. The leader focuses the vision.

Block (1993) and Hunter (1998) promote stewardship as the new foundation for leadership: "The willingness to be accountable for the well-being of the larger organization by operating in service, rather than in control of those around us. The underlying value is about deepening our commitment to service" (Block, 1993).

### ***Leaders Understand Change***

*Perhaps the most significant resistance to change comes from the fact that leaders have to indict their own past decisions and behaviours to bring about change... Psychologically, it is very difficult for people to change when they are party to creating the problems they are trying to change.*

— Tichy and Devanna, 1986

Why is change imperative for today's health care organizations? What is different about today and tomorrow? Why will today's management and organizational structure, strategies and leadership practices not work in the health care system of the future? As one learns and creates or gains new knowledge, this is applied to daily work. This often means change, minor or major, may be necessary. Staff gain the capacity to respond to a changing environment and continuously adjust to the customer's (patient, resident, consumer) needs. Change means one must change in ways yet to be imagined. This is the beginning of process improvement to achieve optimum use of resources and nimbleness essential to affect the way organizations must respond on all levels—macro through micro.

#### **COMPETENCIES**

*What competencies do health care leaders need for changing systems? A national study from the Healthcare Forum (Bridging the Leadership Gap in Healthcare) identified the top six competencies and values needed for the future:*

- *Mastering change*
- *Systems thinking*
- *Shared vision*
- *Continuous quality improvement*
- *Redefining health care*
- *Serving public/community*

— Magnan et al, 1998



Implicit in the type of leadership that stimulates vision is risk. One can neither lead nor improve without taking risk. Even positive change creates uncertainty and anxiety. As Barker (1992) points out, human beings instinctively seek to create recognizable patterns in all aspects of life in order that life has some sense of consistency. When established patterns are challenged or are no longer effective, one is not sure where the changes will lead, and fear sets in. The short-term reaction of management to these types of stresses may be to attempt a "quick fix" or to play the hero; however, as Deming (1986) observes, it is imperative that leaders sustain a "constancy of purpose" and not jump from problem to problem, strategy to strategy, if the organization is to realign itself to a culture of continuous quality improvement.

### ***Leaders Share Power***

At every level of the organization people must be given more opportunities to use their skills, talents and creativity in ways that enable organizations to become more effective in creating new vision, reaching goals, solving problems and serving others. The word "empowerment" is met with cynicism in many organizational environments where it is taken to mean "getting people to do things your way while making them think they are doing it their way" — that is, when empowerment is used to manipulate rather than facilitate. Rather, leaders must empower others in the deepest and truest sense of the word. This requires fundamental changes in how management has traditionally viewed the issue of power. The notion of power as control must be replaced with an understanding that, given the right goals, the right information, the right skills, and mutually agreed upon values, individuals in the organization serve a vital role in helping the organization achieve its aims. Serving others is a vital underlying purpose for enabling others.

*An empowerment style of management creates more innovation, initiative, and commitment, but also more unpredictable behaviour.*

*Managers must weigh the benefits of an empowerment style against the predictability of high control. To talk empowerment but practice control only creates cynicism.*

*—Covey, 1991*



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*Leadership is the issue. Unfortunately, many who hold leadership positions see their role as protecting their organization from the forces of change. The effective leader, on the other hand, embraces these forces to change their organization for the better. They are the architects of a new improved future and are to be commended and supported.*

Don Schurman  
Chief Executive Officer  
Alberta Mental Health Board  
Edmonton, Alberta

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### ***Leaders Support Teams***

Teams are a vital component to the success of CQI. In order for teams to be effective there must be an organizational paradigm shift from a hierarchical, individual focus to a systems focus (Scholtes, 1995; Baker, 1995; Hassen, 1993; Senge et al, 1994).

Now leaders need to focus on a systems approach. The shift to a systems focus implies a "customer-in" mentality where there is a great deal of interdependence between various systems. Teams become participants in and stewards of the system, serving customers' needs. Deming (1986), Juran (1988, 1989) and other quality experts emphasize that virtually all problems are caused by inadequacies in systems. Organizations must move toward establishing functional systems and processes. This will enable teams to be more effective in meeting customer needs (Lumb et al, 1999).



### **NETWORKS**

For the last century, the pyramid has been the organizational symbol for structure, control, status and bureaucracy. More recently, organizational symbols have shifted to networks and cobwebs, with descriptions such as high-performing or ad hoc teams, and horizontal processes. "The shifting image of the organization, however, is found less in morphology and structure and more in the concept of capabilities" (Ulrich, 1997).

Ulrich contends that the critical capabilities of the future are:

- establishing a shared mindset
- re-engaging employees
- creating capabilities for change
- mastering rapid learning



### **Leaders Create a Culture**

*Contemporary quality improvement models such as continuous quality improvement and total quality management reconnect leaders to their organizations' quality processes by emphasizing the leaders' roles in promoting quality as an organizational value, setting meaningful quality goals, and actively using information to improve organizational effectiveness.*

—Yank, 1995

For health care organizations, achieving continuous quality improvement means developing a shared vision that challenges the old paradigms that, in most cases, create new organizational cultures. Culture shapes, in part, how work gets done and establishes the "rules." Many of these rules are unwritten, informal, and taken for granted as "the way things get done around here." As such, they are particularly difficult to change.

Since CQI means not only streamlining processes but also fundamentally altering how work gets done, the old paradigms are made conscious, challenged, and many of them changed or transformed. A vision expressed within the context of an organization's values enables people to shift their thinking in creating the organization's culture. Leaders must be passionate about creating a culture for change in the organization—change that will create a dynamic future. This involves inspiring not just leaders themselves, but also requires setting objectives and implementing improvement plans in a way that results in a whole group becoming committed to the organization's purpose. If front-line staff do not believe in the future described for the organization, they will not be able to focus their energy. Cultural development and nurturing may be the most critical organizational dimensions necessary for the organization to succeed in the new millennium.

Sethi (1997) believes that there is no difference between creating an organizational culture that supports and nurtures self-esteem and creating one that supports and nurtures high performance. He reports that an organization needs to implement a minimum seven basic policies if it is to achieve a culture of high performance and high self-esteem. Sethi proposes the "Seven R" model for describing the characteristics found in such a culture:

- |                                 |                   |
|---------------------------------|-------------------|
| 1. Respect                      | 5. Relationships  |
| 2. Responsibility and resources | 6. Role modelling |
| 3. Risk taking                  | 7. Renewal        |
| 4. Rewards and recognition      |                   |



### ***Leaders Have Integrity***

The leader with integrity possesses a high degree of self-knowledge, candour, maturity, and trust (Bennis, 1989). Leaders keep their promises and commitments, and there is a sense of respect among all who work in the organization. Because of the uncertainty, confusion and anxiety that inevitably accompany any significant change, it is the congruency of leaders with the organization's core values that provides stability during major organizational shifts. In order to deal with the many twists and turns involved in integrating quality improvement into organizational culture, staff must have confidence that leaders are reliable and consistent in relation to the organization's values and goals.

*Persuasion requires credibility, persistence, and an exceptional ability to describe the difference (in terms that are personally meaningful to each participant) between the status quo and the desired future state.*

— Reinertsen, 1998

### ***Leaders Inspire a Vision***

One of the most compelling comments Warren Bennis makes in *On Becoming a Leader* (1989) is his description of being visionary in a way that "lifts people out of their petty preoccupations." He does not mean ignoring current reality or issues of concern to people; however, vision enables us to see beyond the immediate term to focus on the future. Vision gives us the dream, the means, and the will to "manage the dream." An effective leader is vital to developing a sense of the future that stretches the organization beyond its present capacities, yet produces a vision that is seen to be achievable rather than simply remaining in the realm of idealism. A focus on the alignment of the CQI strategy to the organization's vision, goals and objectives is imperative.

*Vision without action is merely a dream.*

*Action without vision just passes the time.*

*Vision with action can change the world.*

— Barker, 1992

A core function of the leadership team is to accomplish alignment in ways that will enable the organization to achieve its shared vision. The team will focus on the "steering functions" of the organization: clarifying vision, developing guiding principles and continuously aligning the organization's strategy, structure, culture and skills, based on the feedback received through highly participative methods (Drucker, 1997).



*Most leaders under-communicate their change vision by a factor of 10. And the efforts they do make to convey their message are of the least convincing variety - speeches and memos. An effective change vision must include not only new strategies and structures but also new aligned behaviours.*

— Kotter, 1999

### **Leaders Communicate**

A continuous quality improvement organizational culture requires leaders who understand the needs of external customers and make the internal improvements necessary to meet or exceed customers' needs. Change always requires that the organization's communication strategy be highly effective. Communicating consistently with staff to ensure that they understand both the process and the results provides the stability they will require for a journey of continuous change. Staff need to become partners in creating a communication network that ensures every area understands the other, so that care and service are improved. Effective communication is a clear indication of the degree of unity the organization has achieved. Multiple and diverse communication strategies and methodologies must be developed and used. Perhaps the most highly regarded

communication comes from the staff's direct manager/leader. Studies time and again reaffirm that face to face communication from one's "supervisor" is the single most powerful mechanism.

Change requires direction. It is the role of the leader to provide direction by recognizing and communicating the purpose of the organization. *"The purpose of the organization is the reason the organization exists, the need in society that it fulfils"* (Langley et al, 1996).

Constancy of purpose is the first of Deming's fourteen points for management and the one he emphasized as the most important. In order for an organization to function as a system, all in the organization must know what the common purpose of the organization is and how their work helps to achieve that purpose. Developing and communicating a formal statement of purpose provides a common understanding; this is a role for and an obligation of the leaders of the organization.



## **EXECUTIVE LEADERSHIP**

*The real role of executive leadership is not in "driving people to change," but in creating organizational environments that inspire, support, and leverage the imagination and initiative that exists at all levels.*

### **Design**

*Executive leaders are designers in the sense of having unique responsibilities around the formal structures within organizations—such as the infrastructures of performance measurement, assessment, and reward, formal governance structures, and the infrastructures that support learning communities. Good design will not create commitment and innovation, but poor design will surely thwart them. If executive leaders do not help in meeting the challenges of formal design, the possibilities for emergence will be limited, and innovators throughout the enterprise will be continually frustrated.*

### **Mentor**

*As teachers, executive leaders mentor local line leaders, especially guiding them in their interactions with those outside their teams. This is vital in meeting the challenges of "believers and nonbelievers" and in dealing with the potential power clashes that the challenge of governance can bring.*

### **Role Model**

*Effective executive leaders serve as role models. They can embody genuine commitment to change through their example of "walking the talk," through their efforts to transform the functioning of top management teams, and to demonstrate genuine commitment to values and purpose. In these ways, the symbolic role of executives as stewards for the organization's long-term contribution can be as important as what they do.*

*—Senge et al, 1999*



## ORGANIZATIONAL CULTURE

*Culture is difficult to define and even more difficult to measure, yet we can all feel it. ...We can do a number of things with the formal organization to change the way we put people together, define their jobs, and design their responsibilities. ... Likewise, if we follow correct principles - fairness, human relations, human resources, and meaning - and integrate those principles into structure and systems, we can greatly influence the culture.*

— Covey, 1991

### THE NEED FOR CULTURE FOCUSED ON QUALITY



*Culture is the vision, values, norms, leadership styles, interpersonal behaviours and behavioural expectations/norms of an organization. How authority, responsibility, rewards and incentives and information systems are designed in an organization will drive most people's behaviours and directly influence the organization's culture.*

The importance of organizational culture is not new (Holman, 1995). In 1967 Peter Drucker noted that "developing executive effectiveness challenges directions, goals, and purposes of the organization. It raises the eyes of its people from preoccupation with problems to a vision of opportunity." Dr. Deming (1986) developed 14 Points (see Appendix A) that were an interrelated system of paradigms, processes and procedures to achieve maximum effectiveness and quality of product and service from people.

Recent literature continues to emphasize the importance of culture. In 1997, Drucker wrote: "The organization is not just a tool. It bespeaks values. ...It is both defined by and defines a specific enterprise's results." Roehm and Castellano (1997) suggest that implementing Dr. Deming's 14 Points in a new order provides a solid foundation for cultural change.

*It is the leadership's responsibility to establish a quality culture.*



## THE CHALLENGE OF CHANGING CULTURE

Organizations encounter difficulty in changing themselves precisely because culture cannot be directly manipulated. The challenge is to attain new, shared perceptions of the beliefs and values central to an organization.

### *Climate vs. Culture*

Culture can be changed by focusing on climate. Understanding the difference between climate and culture assists with setting priorities.

### *Climate*

The climate of an organization is inferred by its members. The inferences are organized around two issues: how the organization goes about its daily business and the goals the organization pursues. The inferences organizational members make about climate are based on the policies, practices, procedures and routines that they are subject to, as well as on the kinds of behaviours that are expected, get rewarded and are supported.

There are four key climate dimensions. The first three relate to function, the fourth to goals:

- the nature of interpersonal relationships
- the nature of the hierarchy
- the nature of work
- the focus of support and rewards (Schneider et al, 1996)

### CULTURAL CHANGE AND DEMING'S 14 POINTS

*With an emphasis on culture, the re-ordered 14 Points of Deming are:*

- Create constancy of purpose.
- Adopt the new philosophy.
- Institute leadership.
- Institute training.
- Encourage education.
- Break down barriers.
- Eliminate exhortations.
- Eliminate arbitrary numerical targets.
- Permit pride of workmanship.
- Drive out fear.
- End lowest-tender contracts.
- Cease dependence on mass inspection.
- Improve every process.
- Ensure top management commitment and action.

—Roehm & Castellano, 1997



*Culture can be changed through a focus on climate. Climate reflects the tangibles that produce a culture, the kinds of things that happen to and around employees that they are able to describe. Only by altering the everyday policies, practices, procedures, and routines, thereby impacting the beliefs and values that guide employee actions, can change occur and be sustained.*

—Schneider et al, 1996

### **Culture**

Culture is a major consideration and a first priority for leadership. It concerns the firmly implanted beliefs and values of organizational members. It resides at a deeper level of people's psychology than does climate. Culture captures a less conscious, more subtle psychology of the workplace. Whereas climate's policies, practices and rewards are observable, the beliefs and values of culture are not so directly visible.

Some authors (Schneider et al, 1996) suggest that focusing first on climate factors will ultimately influence the culture of an organization. To communicate new values and beliefs requires changing tangibles—the thousands of things that define climate, the daily life in an organization.

### **Cultivate Principles and Skills**

Covey (1991) describes a slow transformational process whereby the organization cultivates the principles and skills necessary to be a catalyst in improving the culture. Miller (1997) echoes Covey's thoughts on slow transformation and modelling correct principles: "To change an organization, start with behaviours, and especially with senior management's modelling of desired behaviours. Understand also that changing the attitudes beneath behaviours takes much longer."

Organizations that have succeeded in their transformation did so by successfully shifting their organization's culture toward behaviour and thinking that reflects personal responsibility, accountability, leadership and stewardship. When fear is driven out of an organization, creativity and innovation can flourish. When organizations and the people in them are genuinely practising respect, building trust and being open to learning, they are on a path of transformation.



## ALIGNMENT OF KEY COMPONENTS

The key to a successful organizational transformation is alignment—the adjustment of the organization's strategy, structure, skills and culture. Unless these components are aligned, there will be no transformation (Quantum Solutions, 1998; Shortell et al, 1995; Sluyter, 1996; Chowanec, 1994).

**Strategy** is the leveraging of resources and the alignment of structure, culture and skills to achieve the strategic outcomes being sought, and to realize the organization's vision.

The strategic outcomes that will propel the organization toward its shared vision are the specific, measurable, achievable, realistic and time-based outcomes. Strategy development becomes an interactive process of planning, taking leveraged actions and learning from success and failure.

**Structure** involves the distribution of power and authority within an organization and the way in which the organization's services are organized to achieve its vision.

Structure is like the DNA of an organization. It involves governance; how decisions are made; how accountability is defined; how empowerment is achieved; how work gets done; the dissemination of information within an organization; the design of information technology systems that support the organization's strategy; and the rewards and incentives that indicate what the organization values.

Deming reported that over 90% of the problems experienced by organizations are related to the systems, processes, structures and incentives that drive behaviours and thinking within organizations. If the organization's components of structure are aligned to achieve the strategic outcomes being sought, there will be alignment between structure and strategy.

**Skills** are the fuel that drives an organization's strategy, structure and, ultimately, culture. Skills for the knowledge-based economy include systems thinking, team learning, dialogue, framing and re-framing, reflection, stewardship, knowledge of modern thinking/design tools and personal mastery (*Managing Change*, 1998).

*When you have the mind-set of interdependency, and the skills set for building synergy, inevitably you create effective structures, systems and processes.*

—Covey, 1995

*Transforming an organization's culture is a key to sustainable change.*



**Culture**, as discussed earlier, must be a priority for leadership. The implementation of CQI within an organization often requires behavioural changes at all levels of staff. Education is vital to develop the environment, building such skills as communication, team building and problem-solving.

Sluyter (1996) emphasizes that, in the area of mental health in particular, the dominant factor affecting the introduction of CQI and change is the cultural dimension.

*We have a strong and abiding obligation to help make the quality of work life for our employees one that helps enhance their humanness and creates a culture that supports and encourages growth and creativity.*

—Sluyter, 1996

### **THE WINNIPEG COMMUNITY AND LONG TERM CARE AUTHORITY**

*The Winnipeg Community and Long Term Care Authority (WCA) was established in 1998 under the Regional Health Authorities Act of the Province of Manitoba. The WCA's role is to provide for the successful integration of Winnipeg's community-based healthcare delivery services through its three main portfolios: Community Care and Public Health, Home Care and Mental Health, and Long Term Care and Specialized Services. The WCA is dedicated to building a quality health future for Winnipeg.*

#### **Vision, Mission, and Values**

To build quality in any organization, quality must reign at its core. The WCA's commitment to quality and its eminent leadership in the design and governance of health service delivery in Winnipeg is embodied in its vision, mission, and values statements. In realizing the vision of healthy communities in Winnipeg, the WCA focuses on the needs of individuals, families, and communities, and facilitates the development and well-being of neighborhoods with equitable access to integrated health services provided in homes and through community facilities.

—Suski, Hack and Heaman, 1999



## ORGANIZATIONS & LEARNING

*Sustaining any profound change process requires a fundamental shift in thinking. We need to understand the nature of growth processes (forces that aid our efforts) and how to catalyze them. But we also need to understand the forces and challenges that impede progress, and to develop workable strategies for dealing with these challenges. We need to appreciate "the dance of change," the inevitable interplay between growth processes and limiting processes.*

—Senge et al, 1999

### LEARNING ORGANIZATIONS



Peter Senge (1990, 1999) describes a learning organization as a group of people who are continually enhancing their capacity to create the results they want.

Charles Handy (1994) states that the learning organization should mean two things: an organization that learns, and an organization that encourages learning in its people.

The most effective initiatives create environments for learning by incorporating three basic elements (Senge et al, 1999):

- ◆ **New guiding ideas**

The quality movement is fuelled by the guiding idea that increasing quality does not necessarily mean increasing cost; in fact, low quality and high costs may both be the consequence of poor processes.

- ◆ **Innovations in infrastructure**

New practices, policies and resources are needed to channel activity in new directions. These include new governance structures, new vehicles for exchanging information across boundaries, new systems for measuring success, and new ways to integrate learning and working.



♦ **Theories, methods and tools**

These represent bodies of knowledge that guide effective practice. They must be practical; they must enable work on important issues; and they must have potential to lead to significant progress on those issues.

***Creative Thinking***

Increasing complexity and interconnectedness require that organizations take a fresh look at old problems (Senge, 1990, Senge et al, 1999).

Creative thinking is a core competency that every organization needs to satisfy customers. Creative thinking requires that we think in a new direction; away from or beyond our current mental patterns (de Bono, 1992), toward some new patterns (Higgins, 1994). Plsek (1995) advocates that methods for directed creativity should become a part of the basic tool kit of quality management.

*Every organization needs one core competence: innovation.*

— Drucker, 1995

**LEADERSHIP IN LEARNING ORGANIZATIONS**

Demands for improved effectiveness, greater consumer focus and increased efficiency create new pressures on staff and pose seemingly irreconcilable dilemmas for service managers (Birleson, 1998).

**SHARED VISION**

- ♦ *Create hope and opportunity.*
- ♦ *Inspire commitment.*
- ♦ *Communicate passion.*

Leaders of organizations that aspire to continuous learning must understand the learning processes and act to support development. The role of organizational leaders is to create the conditions essential for learning to take place. These approaches focus on traits or processes that must be present to ensure learning.

Senge takes a pragmatic approach and identifies key competencies that leaders must develop to facilitate organizational learning. These include a commitment to personal self-awareness, systems thinking,

building a shared vision with key personnel and group skills which enhance team learning.



Senge's work overlaps considerably with that of other organizational theorists such as Block, who values stewardship over conventional models of leadership, partnership over patriarchy, service over self-interest, and empowerment of others over hoarding power. "This model of leadership aims to provide inspirational goals, align the interests of workers and organization, provide direction and enhance motivation" (Birleson, 1998).

Practices that managers should encourage and reward include openness, systematic thinking, creativity, personal efficacy and empathy. Garvin (1993) reinforces that learning organizations are skilled at systematic problem-solving, experimentation, learning from their own and others' experiences, and transferring knowledge.

Experience with both organizational and system-wide change often reinforces that the greatest leverage points in systems can be found at the intersection of the component parts of the system, or between groups of people:

- between hospitals and long-term care providers
- between systems of service providers organized vertically
- between departmental silos
- at the hand-off points in work processes (Quantum Solutions, 1998)

*People in a true learning organization have a clear understanding of the criteria to be applied in any decision-making process. These criteria must take into account the values and interests of the decision makers, the implementers, the organization, and the broader stakeholders. Learning about the relationship between decisions made, the criteria they were chosen by, and the impact on stakeholders is a key learning task.*

— Miller, 1993

*As Chilean biologist Humberto Maturana puts it, 'Every movement is being inhibited as it occurs.' This is nature's way. We can either work with it, or work against it.*

— Senge et al, 1999



### THE FIVE LEARNING DISCIPLINES

Senge (1990, Senge et al, 1999) recommends a set of practices, the five "learning disciplines," for building learning capabilities in organizations:

1. **Personal Mastery:** This discipline of aspiration involves formulating a coherent picture of the results people most desire to gain as individuals (their personal vision), alongside a realistic assessment of the current state of their lives today (their current reality). Learning to cultivate the tension between vision and reality can expand people's capacity to make better choices and achieve more of the results that they have chosen.
2. **Mental Models:** This discipline of reflection and inquiry skills is focused around developing awareness of the attitudes and perceptions that influence thought and interaction. By continually reflecting upon, talking about, and reconsidering these internal pictures of the world, people can gain more capability in governing their actions and decisions.
3. **Shared Vision:** This collective discipline establishes a focus on mutual purpose. People learn to nourish a group or organization's sense of commitment by developing shared images of the future they seek to create, and establishing the necessary principles and guiding practices.
4. **Team Learning:** This is a discipline of group interaction. Through techniques like dialogue and skillful discussion, teams transform their collective thinking, learning to mobilize their energies and actions to achieve common goals, and drawing forth an intelligence and ability greater than the sum of individual members' talents.
5. **Systems Thinking:** In this discipline, people learn to better understand interdependency and change, and thereby to deal more effectively with the forces that shape the consequences of actions. Systems thinking is based upon a growing body of theory about behaviour of feedback and complexity—the innate tendencies of a system that lead to growth or stability over time. Tools and techniques such as system archetypes and various types of learning labs and simulations help people see how to change systems more effectively, and how to act more in tune with the larger processes of the natural and economic world.



### **Knowledge Management**

As in other industries, recent changes in health care have created an external environment in which organizations that are "smarter" will enjoy greater success than those that are not, implying that health care organizations that construct formal approaches to the management of knowledge may have a competitive advantage over organizations that do not.

*The entire organization must build, operate, and support a mechanism by which it is able to create a learning, growing, and teaching culture if it is to succeed in gathering and applying its collected wisdom.*

— Brailer, 1999

The central theme of knowledge management is to leverage and reuse resources that already exist in the organization so that people will seek out best practices rather than reinvent the wheel. Organizations usually take one or more of the following approaches to knowledge management to achieve this objective:

- Capturing, storing, retrieving and distributing tangible knowledge assets, such as copyrights, patents and licenses
- Gathering, organizing and disseminating intangible knowledge, such as professional expertise, individual insight and experience, and creative solutions
- Creating an interactive learning environment where people readily transfer and share what they know, internalize it and apply it to create new knowledge (Wah, 1999)

#### **DEFINITION**

**Knowledge management:** 1. the practice of adding actionable value to information by capturing, filtering, synthesizing, summarizing, storing, retrieving and disseminating tangible and intangible knowledge; 2. developing customized profiles of knowledge for individuals so they can access the kind of information they need when they need it; 3. creating an interactive learning environment where people transfer and share what they know and apply it to create new knowledge.



Knowledge management in the health care sciences involves a systematic process designed to "acquire, conserve, organize, retrieve, display and distribute what is known." For the health care delivery system in particular, it can be defined as the process by which an organization is able to:

- Collect information about how it is operating.
- Evaluate the information to understand what is working and what is not working.
- Apply the information in ways that change its processes.

To manage patient care effectively and efficiently, a delivery system must exercise consistent and systematic managerial decision making. An organization must have a well-conceived approach to managing knowledge and a corporate ability to acquire information and apply it in ways that enable the organization to deliver quality care. Knowledge management can be divided into three components:

1. Evidence acquisition
2. Information transformation
3. Knowledge application (Brailer, 1999)

## LEARNING IN THE HEALTH PROFESSIONS

The Plan-Do-Study-Act cycle, which is the scientific method as applied to work, lies at the heart of continuous improvement. The cycle can integrate theory with action, and is a redefinition of the scientific method for application to the world of work.

Langford and Cleary's quality learning model is useful to highlight key features of how an improvement model can provide the foundation for education of health professions. A shift needs to occur in educational systems from an instruction paradigm to a learning paradigm because the mission of educational institutions is no longer to simply provide instruction but to *produce learning*. In their vision of the learning paradigm, they see the need to focus on "learning outcomes" rather than on "instructional delivery" (Barr & Tagg, 1995).

"The potential to place the PDSA cycle at the core of learning in health professions' education is great. Contributing factors to this potential include the historical emphasis on the scientific method in health care, the relationship between clinical education and practice, recent improvements in our capacity to define and measure health outcomes,



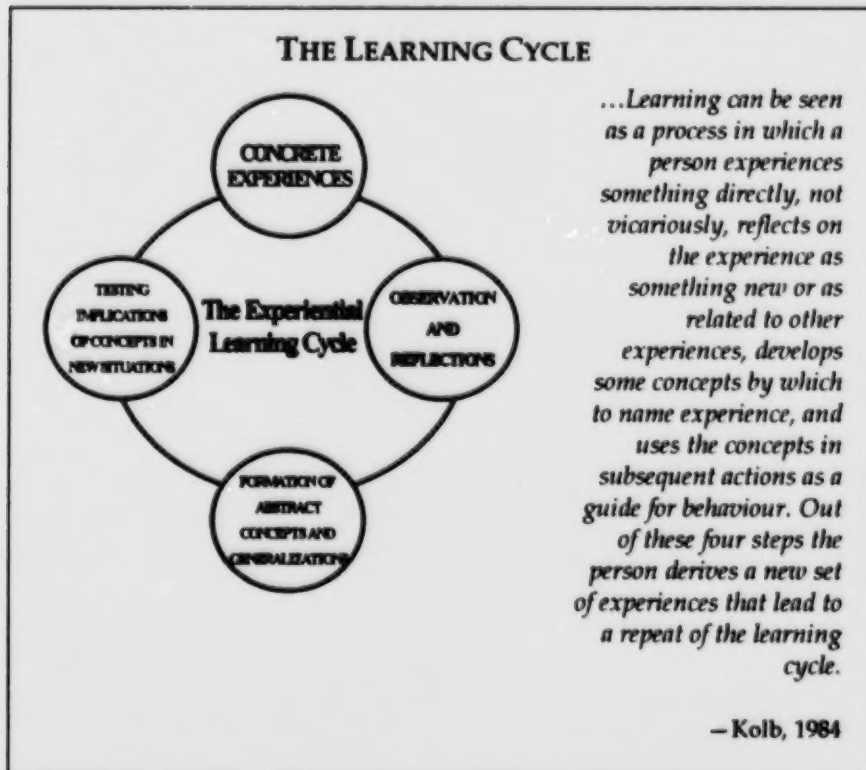
emergent pressures for change in health care and education, and compatible multiple functions of the PDSA cycle" (Cleghorn and Headrick, 1996).

Langford and Cleary (1995) define a *quality learning context* for enhancing learning:

*... quality is a new way of seeing and thinking about the very relationship between teacher and learner. That relationship...is framed in a fundamental context that includes understandings, practices, and beliefs that enhance it and make learning happen. We call this context **quality learning**, because it is deeply rooted in fundamental principles of total quality management...*

Batalden (1996) asks key questions:

- ♦ How can health professions education be better connected to the efforts to improve daily realities?
- ♦ How might health professions education and preparation be broadened to link patient, professional, and societal aims?





## TEAMS

*The employees want to participate in decision-making processes that affect them. They want to help solve the problems.*

— Harrington, 1987

### CQI AND TEAMS



The movement toward continuous quality improvement starts with the uncompromising commitment of the organization's senior leader and board. It demands an action-oriented vision and a commitment to organizational transformation through newly defined processes creating better outcomes.

Initially the actions of organizational leaders can successfully motivate the organization toward a new vision. Over the long term, however, the far-reaching changes of organizational transformation cannot be sustained without the ongoing involvement of many others throughout the organization. The movement to continuous quality improvement must enable and encourage everyone in the organization to work together to take an active and ongoing role in the future.

#### ***Traditional Work Team***

A group of people working together for a common purpose is the traditional definition of "team." The application of the team concept is not new to health care. For example, teams in hospitals composed of physicians, nurses and other staff have worked together to provide care to patients and their families for years. In long term care facilities work teams often develop interdisciplinary programs to meet the needs of residents.

#### ***Quality Improvement Team***

What is different about a quality improvement or process team? This approach encourages interdisciplinary process improvement teams trained in the principles and methods of continuous quality improvement:



- focusing on meeting and exceeding customer expectations to improve quality
- using strategies which empower staff to examine processes and design and implement solutions

### ***Interdisciplinary Team Focus***

Opportunities for improving processes may occur in and among all levels in the organization. Interdisciplinary teams often cross traditional departmental boundaries and challenge individuals from different areas to work together for process improvement.

Depending on the particular process, focused improvement teams can involve staff from many different areas. Each member of a team brings a defined set of skills and understandings. By pooling their skills, talents and knowledge, the team can tackle complex and chronic problems and develop effective solutions through mutual understanding of the entire process.

Both the traditional work teams and the (new) QI teams which form to review a certain process or problem benefit from CQI methods.

## **TEAM EDUCATION AND SUPPORT**

Health care organizations are a wealth of potential. Appropriately developed, trained teams can enable an organization to significantly improve the processes by which care and service are delivered. The timely education of teams and individual members is critical to their successful functioning. (Part Four outlines the evolving training strategies for teams and their various members.) To realize the advantages of teamwork over individual effort, it is essential to train for group involvement.

### **SUPPORTING QI TEAMS**

- ☒ Facilitate teams through process improvement projects, fostering and monitoring team development.
- ☒ Ensure that employees are aware of all process improvement tools and utilize and apply them on a daily basis.

— Bissell, 1999



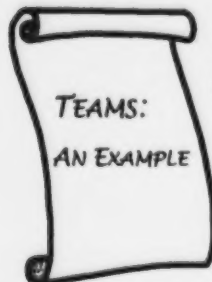
### *Participants*

Different dimensions of the effective functioning of a team may be addressed in the positions of active team participants. Scholtes (1988) describes four clearly defined roles:

- **Guidance team:** supports the project team's activities, secures resources and clears a path in the organization
- **Team leader:** chairs the team, arranges logistical details and facilitates meetings
- **Quality advisor** (a person trained in scientific approach and working with groups): helps keep the team on track and provides training as needed
- **Project team members** (the people who form the bulk of the team): carry out assignments and make improvements

A successful project team requires careful selection of people to fulfil these roles and support, coach and guide their activities.

At VON Toronto two types of teams are:



**Area/Department Performance Enhancement Teams:** teams of staff members within a particular area, department, or specialty group. These teams contribute to the Quality Management Program by obtaining data on services at the request of the Quality Council, assessing quality through audits and other means, and assisting to disseminate new quality practices to their teams.

**Issue Performance Enhancement Teams:** include client and staff representation from throughout the branch. These teams contribute to the Quality Management Program by obtaining system wide data related to issues identified at the Quality Council, and developing solutions to enhance quality customer service as determined by the Quality Council.



## EMPOWERMENT OF THE TEAM

Throughout the organization the contributions of the individual continue to be highly valued within the team context. Clearly, the successful organization of the future is one which shows respect for the individual, listens, and acts to define employee needs. With this commitment employees can more easily become active in improving the quality of their teamwork (Harrington, 1987). Teams are productive viable catalysts that make employee participation a reality.

### *Team Spirit*

Quality improvement is hard work and takes a long time. The synergy that comes from people working together productively on an important project is usually enough to sustain enthusiasm and support, even through difficult times. "As a spirit of teamwork pervades the organization, employees everywhere will begin working together toward quality; no barriers, no factions, all one team;" moving together in the same direction (Scholtes, 1988).

### *Team Charter*

The "chartering of teams" is critical. The team must understand its goals, responsibilities and boundaries. The charter sets the team in the right direction.

*Too often teams spend a considerable amount of their valuable resources trying to figure out what it is they are supposed to do. A detailed team charter focuses valuable organizational resources on the task that needs to be accomplished*

—Wilkinson and Moran, 1998

The team charter delineates the strategic goals, boundaries, measures of success, constraints and available resources for the team. It provides a framework for ongoing discussions between the team and its sponsor about the team's direction and progress.

The charter does not tell the team how to solve the problem or what a solution should look like. Rather, it sets the process in motion, establishes key milestones and desired outcomes. The team must use the tools available to them to decide how to solve the problem they have been commissioned to study (Wilkinson and Moran, 1998).



### ***Teamwork: An Example***

At St. Joseph's Health Centre in London, Ontario, an interdisciplinary team worked to improve the quality of the waiting time in the emergency department. The team reviewed previous surveys, looked at customer concerns, compared staff perceptions of what the customers needed and collected other data. The team then analyzed the data and identified targets for improvement. The results of their activities have been a significant decrease in the average waiting time and improvements in communication between patient and staff.

#### **LINE LEADERS**

##### ***Local Line Leaders:***

*People with accountability for results and sufficient authority to undertake changes in the way that work is organized and conducted at their local level. Local line leaders are vital because only they and their colleagues, not executives, can undertake meaningful organizational experiments to test the practical impact of new ideas and approaches.*

—Senge et al, 1999

#### **NETWORK LEADERS**

##### ***Internal networkers, "network leaders", or community builders:***

*The great strength of local line leaders is their passion for creating better results within their unit. Their limitation is that they often have limited contact beyond their unit. Internal networkers complement the provincialism of local line leaders. Their strength is their ability to move about the larger organization, to participate in and nurture broad networks of alliances with other, like-minded individuals, and to help local leaders, both by assisting directly and by putting them in contact with others who share their passions and from whom they can learn. They are the natural "seed carriers" of new ideas and new practices.*

—Senge et al, 1999



**TEAMWORK KEY TO QUALITY CARE**  
**FILMLESS DIGITAL IMAGING SYSTEM ADDRESSES QUALITY ISSUES**  
**FOR PATIENTS, HOSPITAL AND MEDICAL STAFF, THE ENVIRONMENT**

*HEADWATERS HEALTH CARE CENTRE  
 ORANGEVILLE, ONTARIO*



When the Dufferin-Caledon Health Care Corporation was created on January 1, 1993, it represented Ontario's first voluntary merger of two rural hospitals, the Dufferin Area Hospital and the Shelburne District Hospital. The spirit of teamwork and partnership that was evident at the consolidation of the two facilities has since permeated throughout the organization, providing a model for delivering patient care services in an increasingly tight fiscal climate.

One outstanding example is the state-of-the-art Diagnostic Imaging Department at the Corporation's Headwaters Health Care Centre site which opened May 1997 and replaced the original Dufferin Area Hospital. The Department, the first hospital radiology department in North America that operates totally without film, represents the results of a Multidisciplinary Team which designed the system and committed itself totally and tirelessly to the project. The Team focused on the mission of the organization and never lost sight of their cause to pioneer and implement an innovative system which would improve the quality of care for patients and provide a model of care that was cost effective and responsive to patients' needs.

With the implementation of the new filmless radiology, the achievements within the first year of operation have seen dramatic savings of more than \$200,000; the accommodation of 30% more patients, thus reducing waiting lists; the reduction of radiation exposure by 30 to 80% from the traditional system; the reduction of air contamination and associated absenteeism of 20%; the improvement of resolution of images for additional accuracy and quality of care; the maintenance and recruitment of top professionals; the improvement of quality working conditions; the improvement to the environment with less radiation, no chemical dumping and the saving of trees through reduction of paper usage;



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*and, finally, the overall improvement of quality for the patients, the organization, and the community in its entirety.*

*The Multidisciplinary Team, which set as its goal a leading-edge technology for this rural hospital, had energy, vision, courage and determination. They possessed the conviction of what seemed to be insurmountable and turned their commitment into an opportunity and a reality. It was in this spirit that the project and the team have been a model for individuals and the many organizations they represent who have visited this facility and have seen first-hand the quality improvements that the innovative technology realized.*

*It is a true accomplishment that has allowed this hospital to provide a service that is cost effective, efficient, environmentally friendly, and has vastly improved the quality of care of patients.*

See Appendix C for contact information.



## PLAN/DO/CHECK ACT FOR TEAMS

### Variations on the Theme

#### SHIWHART/DIEMING

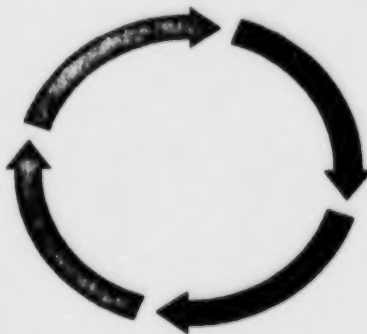
**Plan  
Do  
Check  
Act**

#### HANDY

**Decide  
Do  
Reflect  
Connect**

#### SINGI

**Joint Planning  
Coordinated Action  
Public Reflection  
Shared Meaning**





## EMPOWERMENT

*The shift from compliance to continuous improvement requires a bridge of empowerment by which all employees can contribute their intelligence, knowledge, and experience in the service of full-circle thinking.*

— Dveirin and Adams, 1993

### EMPOWERMENT AND CQI



Organizations that will survive and thrive in the next decade will be the ones that maintain the momentum of continual improvement. The Canadian health care industry is changing as quickly as its private sector counterparts, so the move toward CQI as a strategy to maintain quality and effectiveness should be no surprise.

Human resources in health care account for approximately 70% of the organization's expenditures. In the years to come, the successful organizations will be the ones best able to apply the creative energy of individuals toward constant improvement. To adopt a philosophy of constant improvement as a way of life requires that individuals be empowered to make that change.

#### *Defining Empowerment*

The term has already taken its place among the classic buzzwords in the industrialized dictionary of the 1990s. The traditional definition, "to give power or authority to," is too limited in scope. It does not address the impact on staff that empowerment can have. Organizations that have blindly followed this restricted definition often found empowerment caused more turmoil than progress.

Behaviouralists have studied the implications of empowerment and generally agree that there are key success factors associated with empowerment that must be addressed before staff can successfully be delegated authority. This includes staff having the knowledge, skills and authority to decide and act, *and* taking responsibility for the consequences of their actions.



### *Self-Direction*

Empowerment means self-direction, allowing people to participate in the decisions that affect them subsidiarily. Most managers would agree that such a response would be desirable in their organization. The step between saying empowerment works and actually doing it can be intimidating for both staff and management. Staff must feel comfortable accepting new responsibilities and management must learn how to work with less control.

### *Key Conditions*

Covey (1991) summarizes four key conditions of empowerment:

- win-win agreement (represents a clear mutual understanding and commitment regarding expectations, desired results, guidelines, resources, accountability and consequences)
- self-supervision
- helpful structure and system
- accountability

## **THE HOW-TO OF EMPOWERMENT**

A clear sense of direction is vital if empowerment is to be successful. The executive leadership must provide the foundation with a clear vision.

The first step toward empowering employees is to build self-esteem. Traditional management approaches are shifted to a supportive and coaching perspective. The second step toward empowerment is to offer help without taking responsibility for the task. In order for managers to delegate significant responsibility, it is essential to provide the tools and information that will permit employees to make effective decisions.

People, by nature, want to succeed. Failure often occurs when employees are given responsibilities for which they are not prepared. Sometimes, even with the proper tools and support, mistakes are made. When an employee makes an error, a non-threatening climate needs to be created where staff do not have to fear being judged harshly for making a wrong decision.

Many middle managers fear a loss of control by delegating important tasks for which a manager is ultimately accountable. It becomes easier, however, if the staff to which the task is delegated are competent, committed and informed. This includes understanding what needs to be done, when, and within what boundaries the task is to be completed. Empowerment must be consistent with commitment to the organization.



*Thoughtful delegation is essential.* No two employees are identical, therefore they have different skills, abilities and needs. The amount of authority and responsibility delegated depends on the task and the person. These ever-changing variables require situational assessment by managers.

In guiding staff in the decision making process, clear goals must be set at the beginning of the task. The individual can then look to these goals for guidance in choosing the most appropriate alternative. If all employees were clear on the fit between personal goals, departmental goals and corporate goals, decision making would be greatly simplified. Viewing the bigger picture is important if a decision influences other departments or people. A shared vision of where the organization is headed, supported by shared values, creates a relatively clear path to follow for decision making.

Widespread corporate understanding makes traditional organizational hierarchies redundant. The result is a flattened structure that reallocates management expertise into areas in need of leadership instead of supervision. All employees feel good about succeeding. The key for management is to provide the tools, education and supportive environment to get the job done, then allow staff to do so.

Ownership is another key ingredient to empowerment. If employees are part of the solution, they are much more likely to abide by that solution later on, or suggest further improvements. What results is an empowered employee who is customer-oriented. That translates into higher-quality service.

The benefits of such changes in work habits must be shared with those involved with taking the risks. Management must, therefore, adjust the appraisal system to reward educated risk-taking. Consistent support and reinforcement go a long way toward empowering staff. Providing quality training and skills development foster a sense of commitment to the organization as well as a heightened sense of self-esteem. The result translates into more innovation and new ideas for the organization as employee confidence and trust build.

*Skills such as team building, delegation, communication, negotiation, and self-management are fundamental to high performance. Fortunately these can be learned and enhanced through continuing education and training.*

—Covey, 1991



## EMPOWERED TEAMS

To compound the effectiveness of empowered staff, managers must develop a framework that enables staff to work in teams when it comes to interdepartmental problems. These tend to be the most difficult issues to solve and therefore require the cooperation of many interest groups. For teams to be effective, however, a new set of skills must be added to the repertoire of employee skills training:

- problem-solving
- team-building
- communication
- listening skills

Training must also be timely to be effective. "Just-In-Time" training provides a new team with the tools they need to address the issues. They are applied to the problem at hand and thus are more quickly internalized. The training holds more relevancy when staff can apply the abstract to the practical as soon as possible. It becomes a motivator for the team as they develop a new set of skills for addressing process concerns.

Empowered teams are much more effective at motivating employees because the driving forces are generated by the group instead of by management. To be effective, the teams must be supported by management, be semi-autonomous, have the authority to make decisions, and share ownership of the solution to be implemented. The commitment that develops also provides the incentive for maintaining the improvement process.

### *Successful Empowerment*

Management must initiate the process with an open and enthusiastic discussion of the need for empowerment to develop. Senior managers must prove their commitment by adjusting organizational structures and reward mechanisms, eliminating the most blatant forms of control and supervision, and redefining job descriptions. The next step is to identify key processes for improvement that can be used as examples for staff.

- ◆ Initially led by management, staff can begin trusting management commitment to the new way of working. A clear vision for each process allows staff to assist in problem solving. As experts in their own area of the process, they have a vested interest in working on improving the system. Management must encourage and assist the improvement team when called upon for support.



- ◆ A clear communication strategy that celebrates the successes and achievements of the group helps maintain the growing momentum. Transforming employees into heroes within the organization fosters commitment and initiative. Linked with a compatible reward and recognition plan, an empowered individual internalizes the new mindset and begins to seek out new improvement possibilities almost subconsciously.
- ◆ Managers must also be praised for empowering their staff and fostering a non-threatening environment for risk-taking. Senior management must allow their middle managers the time necessary to relinquish authority and control and adjust their management style to more of a coaching and supportive role.
- ◆ Staff performance can be measured by an employee's customer orientation, team involvement, risk-taking and quality-driven performance.
- ◆ Finally, the last step to true empowerment is to keep at it. The process may be painfully slow but the results are worth the wait. This does not mean management must be satisfied with the pace of progress. Changes to a strategy are almost always necessary. The key is not to give up. Internalizing new ways of leading staff teams is a slow process; even slower for the employees who may feel intimidated by the new responsibilities offered to them. Some will resist out of fear of the unknown or fear of failure. A well-developed empowerment strategy, however, can be a powerful antidote to the negativity, anxiety and distrust of traditional management.



### STAFF ENABLEMENT

Some experts have come to believe that many organizations would be better off without empowerment because they empower so badly and do more harm than good. The critical ingredient to empowering individuals is that they be involved in all aspects of the process. Unfortunately, many organizations stopped short after delegating authority and responsibility. They did not help supervisors shift their management style to one of team leader or coach. Structural changes were often ignored as well. Without changing the organizational hierarchy and the performance appraisal system, empowered staff were not "enabled" to use their new skills. Once the tools and information are provided by management, employees must be allowed to use these skill sets to effect changes. They must be enabled.

Empowerment can be win-win for both the organization and the employees if properly designed. Most employees want to be enabled and given the opportunity to show their true ability, but they need information, effective feedback, recognition and a clear definition of their responsibilities. These include specific details that define what must be done by whom and by when.

Empowering or enabling staff, whichever term is chosen, is a fundamental aspect of CQI. It represents a basic change in management approaches and has far-reaching implications for transforming organizations. Vision, values, culture and a flattened organizational structure add up to an organization that emphasizes the development of its key resource—its employees—in the pursuit of higher quality.



## AN ORGANIZATIONAL DESIGN FOR CQI

*A key element in the success of a quality improvement process is a creative and dynamic organizational design that will guide evolving CQI strategies.*

— Health and Welfare Canada, 1993

### QUALITY COUNCILS AND SUPPORTING COMMITTEES



In many organizations a quality council or steering committee is responsible to provide a strategic focus for the implementation of continuous quality improvement throughout the organization. In fulfilling this purpose, the quality council is responsible for a variety of activities including:

- providing visible leadership for board, managers, unions, health care professionals and staff
- ensuring the implementation of innovative strategies and monitoring the results associated with organizational transformation
- coordinating the development of an annual operational and quality plan
- planning, identifying and monitoring analysis of major cross-functional, clinical and non-clinical processes
- tracking the implementation plan to minimize restraining forces and accelerate driving forces

The quality council is comprised of senior representatives from all operational areas of the organization, frequently chaired by the President (President = CEO = Executive Director = Administrator), and supported by a team of resource personnel involved in the direct implementation of quality improvement strategies. The quality council/steering committee is responsible through the President to the board of directors.

Depending on the size and complexity of the organization, several other committees and personnel play important and integral roles in the successful implementation of improvement processes. For example, medical and service quality improvement subcommittees can provide focused strategic direction to the organization's quality council/steering committee.



## **A QUALITY MANAGEMENT PROGRAM**

### **VON TORONTO BRANCH**

*The VON Toronto Quality Management Program consists of a variety of elements that are all directed toward enhancing and maintaining quality customer service. These elements include orientation, public relations, collaboration and team approach, communication systems, the leadership administration function, education and career development, recognition program, performance management, risk management, and research and development.*

*The Quality Council acts to ensure the highest quality of customer service possible in the Branch through defining and implementing appropriate quality assessment measures. The Quality Council consists of Directors and Managers with an ongoing link to the Professional Practice Committee.*

*Input related to quality of customer service is forwarded to the Council on a regular basis from clients, funding agencies, community agencies, and staff. All practices are reviewed through planned audits, satisfaction surveys and other quality assessment measures on a regular basis. Data from such reviews are forwarded to the Council. In addition data related to quality, from clients, funding agencies, other community agencies and staff, obtained through informal means, are submitted to Council for review.*

*It is the role of the Council to assess and analyze data, define the issues and problem areas, and make recommendations related to approaches (policies, procedures and/or practices) that will maintain and enhance quality customer service. The focus of the Quality Council is on modifying, expanding or in some way altering any one or more of the elements that make up the Quality Management Program. To do this the Council utilizes Area/Department Performance Enhancement Teams and Issue Performance Enhancement Teams.*

**See Appendix C for contact information.**



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### **CORPORATE STRUCTURE TO SUPPORT THE VISION**

A fundamental understanding of organizational complexity is necessary for the implementation of CQI. Also essential is the recognition that "the process of adoption faces significant challenges at various stages" (Kaluzny and McLaughlin, 1992). Because health care organizations are frequently multi-structured, representing amalgamations and coalitions of individuals, departments, divisions and professional groups, particular attention must be paid to the various work groups and the differential effect of CQI among these groups. The very nature of the task can influence the reaction to CQI.

As improvement processes become an integral part of each area, the corporate quality structure must continually be evaluated to assure the organization's ability to focus on the needs of the customer.

Senior managers become much less involved in operational decision making; they become more focused on strategic visioning, corporate coaching and sponsoring. Middle managers assume an enhanced role as educators and sponsors. They work in collaboration with their staff and other departments to facilitate decision making. All managers become active examples for all staff in a movement from the "old way" to the "new way" (see Table 1).



Table 1: Management Styles		
Issue	Traditional Style "Old Way"	Style 2000 "New Way"
The need for quality	Meeting standards	Continuously improving
Focus of quality	Organization defines quality: Reactive • inspection • firefighting	Customer defines quality: Proactive • planning • prevention
The role of leaders or managers	Controlling	Collaborating
Responsibility for quality	Defined individuals/departments	Everyone
Beliefs toward problems and waste	Problems come from employees	Problems come from processes and designs
Beliefs toward the employees	People must be forced to improve quality	People want to improve quality
Beliefs toward customers and suppliers	They are problems	They are partners
Beliefs toward the processes	Management by opinion/authority Improve within departments using hierarchy	Management by fact Improve across departments using networks
Beliefs about quality	Quality costs more Countable costs Not enough time to do it Conformance to standards	Quality focuses resources Total costs Not enough time <u>not</u> to do it Conformance to expectations

(Adapted from Berwick DM. *Healthcare quality: a new way of thinking*)

As the quality vision cascades its way through the organization, the role of managers at all levels evolves significantly. The traditional management style of sole planner, organizer, director and controller is replaced by a focus on leadership, empowerment, assessment and partnership.



## ADOPTING CQI

How well an organization can deal with a number of "transitions" will ultimately determine if CQI is adopted and integrated into the activities of the organization. Researchers generally agree that CQI adoption requires multiple decisions and actions. Implementation of these decisions takes time and involves various individuals and work units within the organization.

Stages of the adoption process are:

- awareness
- identification
- implementation

For example, awareness is the first stage in the process of integration of CQI and includes three transition challenges:

1. The organization moves from the acceptance of the status quo to the recognition that there is a discrepancy between how the organization is currently performing and how it could or should be performing.
2. The organization realizes that the existing definition of quality is no longer adequate, and places more emphasis on the customer.
3. The emphasis on the autonomy of the provider changes to an emphasis on the interdependence of all personnel involved in providing quality of care, including the recipient.

*The more an organization clarifies, communicates, and carries out its mission, vision, and values, the easier it is to attract people who share similar beliefs and desires. Since the desire to achieve is an attitude, every organization has the opportunity to design attitude into the fabric of the organization. ... Some will do this better than others and will gain the benefits.*

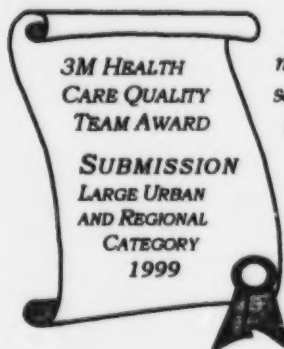
— Harris, 1998



## FROM CRITICAL CARE TO COMMUNITY CARE REINTEGRATION OF VENTILATOR DEPENDENT PATIENTS INTO THE COMMUNITY

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London Health Sciences Centre  
London, Ontario



Within the Intensive Care Unit (ICU), mechanical ventilation is typically related to the severity of illness. As such, ICU teams do not usually consider transfer of a person out of the ICU until that person is off of the ventilator and deemed stable for transfer. In very few cases, the person remains on the ventilator and reaches a stable state. Equally important, they accept that ventilator support is essential to continue on with their lives. A factor that distinguishes these people from the acute ICU ventilated patient is their ability to be switched from a high technology ICU ventilator to a simple home ventilator. They no longer require the level of high technology intervention that the ICU offers.

In the past, the barriers to discharge adult individuals on home ventilators to the community were so overwhelming that, in one case, the person lived in one of the London Health Sciences Centre's (LHSC) ICUs for 3 years until his death in November 1997. Now, faced with similar patients in identical situations, the questions asked were, "Why have they lived in ICU?" and "What is the right thing to do for these patients?"

Both of these queries encouraged the ICU team to think "outside of the box" and search for other options.

In addition, the appropriate and efficient use of critical care resources was a motivating factor. The individuals requiring permanent ventilation are extremely few in number as compared to admissions to the ICU, (1% of overall ICU admissions; however, these admissions consume up to 25% of ICU bed days. Also, bed availability within the ICUs was a growing problem and, by the slowing or cancellation of emergency and surgical services due to lack of ICU bed availability, there was an effect on the community at large.



*With the success of this initiative, many achievements were realized that affected services from ICU to the community. Within the Critical Care Program, improvements in bed utilization and resource efficiencies were achieved. The length of time that a long term ventilated person "lived" in the ICU dropped from 29 months to 4 months duration. This resulted in the unblocking of ICU beds and increased availability of the beds for the critically ill patient requiring acute intervention.*

*As a result, the bed availability increased an average of 7% within LHSC's ICUs.*

*By an ability to discharge earlier, the number of ventilated hours and bed days for people who needed to remain in the ICU for ventilation longer than 8 weeks dropped 45% during the 4 months post implementation.*

*A further indication of sustained gains is that among five people discharged to the community, there has not been a single re-admission into an acute care facility. This speaks to the quality, comprehensive knowledge and skill transfer between the acute and community caregivers, and the quality of care that the community can offer when they are well supported.*

*Primarily, the person dependent on the ventilator and the family gained significantly by realizing an optimal quality of life and a brighter future. A key success factor was the satisfaction of the patients, their families and the individuals on the discharge teams. By focusing on the persons and the families, and not focusing on the extent of the barriers, but rather identifying and removing the barriers, the team was able to overcome the challenges for transfer to the community. Each team member had a strong desire to contribute to the quality of the patients' lives by doing whatever they could at their facility to ensure the transfer took place.*

*As a result, these individuals now enjoy life much like they had prior to their accident or illness, close to family and participating in their community's activities. Truly, this exemplifies patient and family centered care!*

**See Appendix C for contact information.**







# IMPLEMENTATION

*The CQI Journey*



PART FOUR







## Overview

*This section details:*

- ✦ *CQI Implementation Guidelines*
- ✦ *The CQI Plan*
- ✦ *Communication Strategies*
- ✦ *Human Resources*
- ✦ *Education*

*The phases of the CQI journey are illustrated:*

- ✦ *Building Awareness*
- ✦ *Planning*
- ✦ *Deployment*
- ✦ *Full Integration*

*Planning, education and communication are vital components of quality improvement implementation.*







# CQI IMPLEMENTATION GUIDELINES

## INTRODUCTION



From observation, a review of the literature, and direct experience of health care organizations, a model for implementation strategies has been developed. While specific applications and the time required to complete each phase will vary from organization to organization, the CQI Implementation Guidelines represent a working model that can be used as a guide and reference for organizations considering adoption of the CQI approach.

Adopting the CQI approach is a lengthy process. It represents a significant change in organizational culture and philosophy of management. Implementation of CQI occurs in distinct phases that last from a few months to years. The speed and ease with which organizations move through each phase depends upon variables such as leadership, commitment, availability of resources, and external forces. The activities of each phase are built upon the knowledge and expertise gained during the previous phase.

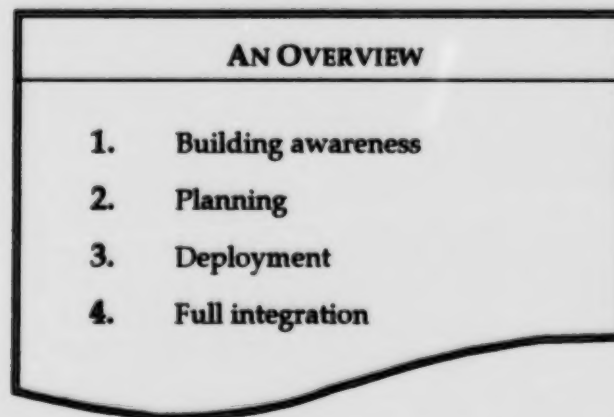
There are several essential components in the implementation of CQI. (Some developments occur in parallel, others in sequence.) CQI calls into question structure and processes, leadership, partnerships, empowerment, and enabling strategies.

*As the TQM [CQI] processes are applied and adapted to health care, strategies for implementation are refined. The strategies relate to leadership, communication and education.*

— Health and Welfare Canada, 1993



## PHASES OF IMPLEMENTATION



### ***Phase 1: Building Awareness***

During this phase the organization's senior executives and key clinical staff explore the CQI approach in order to:

- ♦ Gain understanding of CQI principles
- ♦ Determine strengths from which to build
- ♦ Identify potential opportunities for improvement

This new management approach may be initiated because of opportunities for improvement identified through various survey mechanisms, and it may represent the realization of a need to respond to major challenges faced by an organization.

As CQI requires significant changes in management philosophy and behaviours, it is critical that, before implementation begins, the organization leaders such as the senior executive staff, medical advisory committee and board of trustees fully understand the impact on management style and the requirements for organizational focus, energy, time and resources.

Once this understanding is reached, senior executives will then define their vision of quality and determine the integration of the vision with the organization's overall business strategy. When a quality vision is formulated, the senior executives must determine their own *and* the organization's readiness for change. This may be accomplished by various



survey instruments, such as questionnaires, and by conducting planning exercises.

The leaders then turn to the main thrust of the CQI approach which is "customer focused." Internal and external customers are identified, and their needs, desires and expectations are defined. Customer focus will continuously develop as each phase of CQI is implemented. All decision making will ultimately become focused on the customer.

### ***Phase 2: Planning***

- ◆ Development of a general CQI plan: The plan will set goals for the implementation of the CQI approach, define critical measures of success, and identify actions needed to make the organization's new values real.
- ◆ Establishment of structures to support the plan: The creation of a quality council or steering committee establishes a high-level team to guide and direct implementation. The quality council may be an existing committee or a newly formed group. Membership usually includes the organization's senior executives and the quality manager. If medical representation is not adequate from among the senior executive group, additional physicians may be appointed to the quality council. Some organizations have union representation and/or customer representation on the quality council. The size and nature of each health care organization will in turn determine the composition of the quality council.
- ◆ The quality council identifies major organizational problems or important issues to be resolved by initial project teams. Project teams will address high visibility issues that have the potential for yielding gains and a good probability of achieving significant results.
- ◆ Facilitators for CQI implementation are chosen and trained, as are members of each project team. The pilot teams begin to plan the initial phases for quality improvement, gather data and analyze results.
- ◆ Communication and feedback systems continue to develop.



### ***Phase 3: Deployment***

A detailed plan is necessary in order to continue "roll-out" across the organization. This includes structuring the daily management of CQI, building on initial results, and continuing training in CQI principles and techniques.

- ◆ **Communication and Celebration:** As teams begin to produce changes, the organization must communicate and celebrate these results. Reward and recognition programs should be aligned with the organization's CQI vision.
- ◆ **Benchmarking:** The organization will benchmark its own results against best practice from other organizations. In this manner, new standards of performance and outcome measures will be developed, and continuous quality improvement will begin.
- ◆ **Key Processes:** Processes key to the organization's mission are described and documented. Those responsible for each process are identified. This exercise will enable the organization to assess its process capabilities, and will provide a baseline from which to choose processes to review and improve.
- ◆ **Customer Participation:** The organization continues to solicit customer participation, and incorporates customer feedback in process changes.



### ***Phase 4: Full Integration***

Internal processes and structures are aligned with the CQI approach.

- ◆ Customers are involved in new processes from the beginning.
- ◆ Participative management is widespread, and quality values are part of daily management.
- ◆ The CQI plan is assessed and modified to achieve long-term strategies.
- ◆ Progress in continuous quality improvement is evaluated. There is evidence of improvement in performance of the entire system of health care delivery.



- ◆ Based on the experience of health care organizations to date, it takes a minimum of five years for CQI to be fully integrated. (See Figure 1.)

**Figure 1: CQI IMPLEMENTATION PHASES**

Phase 1	Phase 2	Phase 3	Phase 4
Building Awareness	Planning	Deployment	Full Integration
Time: 6 Months	18 Months	36 Months	60 Months
<ul style="list-style-type: none"> <li>▪ Educate senior executives and key medical staff</li> <li>▪ Develop clear vision and obtain commitment from major stakeholders</li> <li>▪ Determine organizational readiness for change</li> <li>▪ Clarify strengths and select opportunities for improvement</li> <li>▪ Identify and understand customer expectations</li> <li>▪ Formulate communication plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop implementation plan</li> <li>▪ Build structure to support CQI</li> <li>▪ Train and prepare facilitators</li> <li>▪ Select and launch initial projects</li> <li>▪ Build commitment to vision through leadership and communication</li> </ul>	<ul style="list-style-type: none"> <li>▪ Refine plan</li> <li>▪ Communicate and celebrate initial results</li> <li>▪ Continue training program</li> <li>▪ Roll out across organization</li> <li>▪ Establish benchmarks and standards</li> <li>▪ Seek feedback from customers</li> <li>▪ Document organizational processes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Implement system changes</li> <li>▪ Maintain momentum</li> <li>▪ Evaluate progress</li> <li>▪ Make CQI the management approach</li> <li>▪ Involve customers in all processes from the beginning</li> <li>▪ Improve processes continuously</li> </ul>



## ROLE OF CONSULTANTS

Continuous quality improvement is a new approach that fundamentally changes an organization's culture and method of operating. Thus, it is not a program that can be purchased readymade or delegated to an outsider; however, some organizations have found that consultants can play a valuable role in developing the CQI approach, especially in early implementation.

In particular, consultants may:

- ◆ *Educate* senior executives and carry out training of the first project teams, using a train-the-trainer model.
- ◆ *Assist* in determining an organization's readiness for change, and in identifying customer expectations.
- ◆ *Develop specific elements* of the CQI plan, such as a communication plan or a reward and recognition program.
- ◆ *Provide special expertise* on an as-needed basis, in areas such as statistical process control or alignment of management structures.

Some organizations have implemented the CQI approach without consultants, using only the resources available within the organization. The decision whether or not to engage a consultant depends on an organization's preferences, experience and available resources.

### A "RECIPE"

A research-based recipe for breakthrough improvement and service:

1. A customer focus
2. Innovation through information technology
3. An empirical methodology for predicting success
4. Leadership (Gustafson, as quoted in Gertais, 1999)



## THE CQI PLAN

*If you don't know where you are going, it doesn't matter which road you take.*

Scarecrow, The Wizard of Oz

### THE ROADMAP



Like any major strategic initiative, CQI requires a corporate plan. Within the complex organizational structures usually found in health care organizations, it is essential that a common "roadmap" exist to manage the CQI deployment process. Without a CQI plan, the initiative can be fragmented and important aspects overlooked.

The CQI plan must exhibit both relevance and ownership. Relevance reflects the need for the CQI plan to be tailored to the individual needs of the organization. There is no single formula or plan that applies to all organizations. Indeed, individual CQI plans will also be unique within the departments or programs of an organization, and therefore relevant to that department. The relevancy must be developed from within the facility/department.

The CQI plan must be driven by the vision of the organization and the necessary resources to support same. It is vital that the CQI plan ties into the overall strategy of the organization.

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*These years of experience have enabled us to realize that to sustain a Continuous Quality Improvement Program, an organization must clearly define its intentions, plan its actions and measure the results. The current action plan and the deadlines determined by the Board of Directors are proof of the CLSC's desire to move forward and most of all, to maintain the high quality of services.*

Yves Poirier  
Executive Director, CLSC La Petite Patrie  
Montreal, Quebec

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## ELEMENTS OF A CQI PLAN

Each CQI initiative is unique within its respective institution, and the same uniqueness applies to the CQI plan. There are, however, some common elements that may be found in many organizational CQI plans which should address many of the following questions:

- ◆ **Background:** Why is the organization at this point? What has been accomplished to date? How will the CQI plan integrate with the past?
  - ◆ **Definition of CQI:** What does CQI mean within the facility? What is the scope of its application?
  - ◆ **Vision:** What is the facility's preferred future concerning customers, suppliers, processes, etc?
  - ◆ **Values:** What are the three or four core organizational principles that provide the behavioural context for all organizational activities?
  - ◆ **Implementation Schedule:** This section, the heart of the plan, is often very detailed and specific. What are the activities, primary responsibilities, objectives, and target dates to improve performance in several key areas of CQI? Does it contain a detailed implementation plan for the extensive training effort central to the success of CQI?
- As the CQI culture matures in the facility, this section will also address issues such as:
- What major processes are targeted for improvement?
  - Which cross-functional teams are being established, are in progress, or have completed their process improvement activities?
  - Who are the champions for these major process improvements?
  - How are these process improvement activities linked to the vision of the organization?
  - ◆ **Linkages:** How are the facilitators, trainers, coordinators, medical staff, department and nursing unit quality committees, and improvement teams going to work together? How will they link to the corporate steering committee and corporate plan? How will the CQI principles

### ELEMENTS

*The past*

*The scope*

*The vision*

*Core principles*

*Schedule*

*Key issues*

*Linkages*

*Accountability*



and values, and the CQI plan, be communicated to all staff within the organization?

- ◆ **Assigned Responsibilities:** What are the responsibilities of the senior executive to frontline supervisors, individual contributors, coordinators, and improvement teams? How will everyone be held accountable for improvement activities?

## DEVELOPING THE PLAN

The CQI plan, by necessity, needs to address the various components of CQI as described by the theoretical model of CQI adopted by the organization. The following broad categories will need to be considered:

- ◆ **Context:** The facility must make a significant commitment to implementing a CQI initiative, incorporating a cultural change in attitude towards staff, customers and suppliers. This must be actively demonstrated by senior administrators, but all staff need to understand the rationale and principles of CQI, as well as the vision for the organization. Hiring, orientation, and promotion must reflect CQI principles and the organization's values. There must be a strong focus on customers, both internal and external, and on processes. A communication plan should be developed with the objective of informing, explaining, motivating and involving all facility staff in the process and principles of CQI, to begin changing the culture of the organization.
- ◆ **Capability:** Extensive, massive, and wide-scale continuous skill building must be given to all staff involved in, supporting, and leading the CQI process. An education and skills development plan should be designed to identify the skills needed to initiate and sustain the CQI implementation strategy, plan for the preferred teaching-learning strategies available such as 'just-in-time' training, and plan for effective evaluation of the education/skills development plan.
- ◆ **Capacity:** As well as an organization acquiring skills to support CQI, skills or competencies must be developed to support the qualities that are important to the organization, such as customer focus, data driven decision making and team work.

### COMPONENTS

*Context*

*Capability*

*Capacity*

*Infrastructure*



- ◆ **Infrastructure:** All systems (e.g. finance, human resources) and structures must be aligned to support both health care providers and patient care needs. Staff reward and recognition processes must be aligned to reinforce CQI principles and organizational values. Most importantly, all staff need to be active in improvement activities and teams. Appropriate quality indicators and patient care outcome measures must be established, measured and used to identify areas of potential improvement. Customers need to be continuously surveyed to identify their changing needs (Andrews et al, 1994).

### ***Departmental and Program Plans***

Individual departments, divisions, nursing units, and/or medical programs should also develop CQI plans. These may be as detailed and extensive as the corporate plan or less so, but they must align with and support the corporate plan. The departmental program plans should have a common format and terminology in order to facilitate cross-functional improvement initiatives. The corporate plan focuses on strategic initiatives, significant areas requiring improvement and the deployment process of the CQI corporate initiative. The department/unit-level plan focuses on the objectives and processes specific to that area of the facility. It is particularly concerned with how staff participate in CQI, and conversely requires extensive staff input and participation in its development. Both the corporate and departmental/unit-level plans need to balance long-term initiatives with short-term objectives. Early successes, however small, are valuable in sustaining momentum.

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*Continuous quality improvement demands education, inspiration  
and skill development—each a separate and critical factor.*

Jim Clemmer  
President, The Clemmer Group  
Kitchener, Ontario

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## **THE CQI PLAN: AN EVOLVING DOCUMENT**

Once the draft plan has been developed, it is critical that it is approved and supported by the senior management team. The CQI plan has a far-reaching impact on the organization, and the partnership of the CEO and clinical leaders must be prepared to support it with their time, actions and appropriate agency resources. The plan must be modified until consensus support and approval have been reached.

In summary, the annual CQI plan provides a common framework by which the health care agency can progress on the CQI journey. It is an evolving document that will change with the quality maturity of the organization, and will continuously stress different areas of CQI as the organization moves through each evolutionary stage of CQI.



## **A REGIONAL PLAN FOR QUALITY**

### **A MANAGEMENT PLAN TO INTEGRATE & COORDINATE QUALITY FOR THE NORTH SHORE HEALTH REGION NORTH VANCOUVER, BRITISH COLUMBIA**

This plan provides a framework for developing and implementing an integrated and co-ordinated approach to monitoring and improving health care and health service in the Region.

Key components of the Plan are:

- the Region's Goals and Principles for Quality
- a proposed accountability framework which outlines roles, responsibilities and reporting relationships
- implementation strategies

#### **GOALS FOR QUALITY**

The goals for an integrated approach to quality in the North Shore Health Region are to:

1. Provide a common framework, language and approach for quality improvement for health providers across the Region.
2. Increase accountability and promote informed decision making particularly in relation to how to use resources to achieve the best outcomes.
3. Support and enable the Region's goal of developing an integrated and seamless delivery system.
4. Demonstrate the Region's commitment to involving consumers in defining health care needs and quality services/care.
5. Build capacity within the organization through empowering staff and teams to take greater responsibility for managing and improving quality for the populations they serve.
6. Provide a way of linking population health indicators and outcomes with health system performance indicators.



### **VISION**

These goals are aligned with, and guided by, the Region's Vision of Health which encompasses five principles:

- Better health
- Greater public participation and responsibility
- Bringing health closer to home
- Respecting the care provider
- Effective management of the new health care system

### **FRAMEWORK**

This is to be achieved within the following framework:

1. Creating the culture for quality
2. Implementing the structures and processes to support quality
3. Building the technical infrastructure to support quality
4. Aligning quality initiatives with strategic priorities

Goals were developed to implement within three, six and twelve month periods for each of these strategies.

The Regional Plan was prepared by HMRG, a health and public sector consulting group. See Appendix D for details of this Regional Management Plan.



## COMMUNICATION STRATEGIES

### *Effective Communication*



Effective communication is essential to the successful implementation of quality improvement in an organization. CQI involves bringing about changes to the values, attitudes, behaviour and, ultimately, the culture of an organization.

The communication plan for CQI takes into consideration that what is to be conveyed is not simply information, but a new set of values and new ways of examining and improving the way work is done. Because CQI is a never-ending process, it is important that the communication plan goes beyond the initial announcement, to support and reinforce efforts in all stages of CQI implementation.

### *Environmental Analysis*

A communication plan is designed with the environment, culture and practices of the organization in mind. This often requires that an environmental analysis be carried out as the first step in drafting a communication plan.

An environmental analysis involves an examination of how the CQI initiative came about, the environment into which CQI is to be introduced, the strategy being designed for its introduction, the leaders who will play championship roles in CQI implementation, and the audience's level of awareness and understanding of the concepts which are being introduced.

The purpose of the environmental analysis is to gather information necessary for the design and implementation of a plan that is tailored to the needs of the organization.



## **ELEMENTS OF THE COMMUNICATION PLAN**

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A communication plan considers the following elements:

- ◆ The message
- ◆ The audiences
- ◆ The objectives
- ◆ The media
- ◆ The messengers
- ◆ The timing



### *The Message*

A good communication plan begins with a clear understanding and agreement among the organization's senior leadership of the message to be communicated. This message reflects the CQI mission and its attendant values. Communication is aimed at delivering and reinforcing this central message consistently over time.

### *The Audiences*

The communication plan should clearly identify the target audiences—those who are critical to the success of the mission. These are the "customers" of the communication plan, and will include both internal and external customers. In a health facility, internal customers would include board members, health care providers, volunteers and auxiliary members, and all employees from top management to front line workers. External customers would include patients and their families, visitors, students, suppliers, contracted service providers, other health care providers in the continuum, related organizations and stakeholder groups, government officials, the media, and the general public.

The communication plan should take into consideration the relative importance of each customer group to the success of the organization in carrying out its mission, present attitudes, behaviours and knowledge level, and the direction and extent of change in attitudes, behaviour and knowledge to be targeted.

### *The Objectives*

Objectives of the Communication Plan range from providing information to sustaining change.



*Increase  
awareness*

*Teach*

*Motivate*

Initially, communication is aimed at increasing awareness of the CQI initiative—its basic concepts, and how it is linked to the organization's business issues and other strategic initiatives. At later stages of the implementation process other information, such as quality improvement and the successes achieved, is regularly communicated to all staff to sustain their interest and stimulate further efforts.

It is important that staff understand why CQI is being introduced, what it is about, what is involved and expected of them, the methods and tools for achieving improvements, and how different stakeholder groups will be affected by the CQI process.



Continuous quality improvement does not happen simply because employees have been informed of the need for change. An important objective of the communication plan is therefore to motivate employees, energize them into action, and reinforce their commitment to quality concepts and values. To this end, it is important to communicate successes, no matter how small.

An effective way to get employees to buy into CQI concepts and principles is to make them active and full participants in the change process. An objective of communication is therefore to involve employees in teamwork and in the active application of CQI principles and use of CQI methods in their daily work.

This objective can only be met when communication efforts are sustained over time. At the beginning, efforts will need to be more centralized and intensive, even though the impact may be small and not easily visible. As the CQI message is spread to more people, they begin to interact with and influence each other, and become part of the communication network.

### *The Media*

The CQI message should be communicated by making use of existing programs as much as possible. This is not only a cost-effective method; it also reinforces the idea that CQI is not a novelty or an add-on, but a better and smarter way of getting the job done. Incorporating the use of existing programs into the plan also ensures that communicating the CQI message will be an ongoing process, rather than a one-time event.

The media for communicating CQI concepts, principles and methods include:

- print material: newsletters, brochures, and guidelines
- case studies: provide examples of CQI in action and publicize the achievements of quality improvement teams
- visual identity: logos, pins
- videos documenting CQI in action
- regular management meetings where a portion of the agenda could be committed to the discussion or exchange of CQI-related information and quality improvement updates
- task forces and committees in which CQI methods and tools could be demonstrated to facilitate teamwork
- special sessions: employee lunchtime sessions, periodic forums, and educational programs
- celebrations and other special occasions which recognize and reward successes



### *The Messengers*



Once the objectives, activities and media have been mapped out, the communication plan identifies the people who have responsibility for undertaking those activities.

The most important people in CQI communication are the leaders of the organization; however, before senior managers can become skilled advocates of CQI, they have to understand quality concepts and principles well enough to communicate them to others and use them in their day-to-day management.

The responsibility of CQI and communication specialists is to help senior managers by equipping them with the right tools and materials to deliver the message.

The most effective role senior leadership can play is to ensure that their actions and decisions are consistent with the words they use to convey the CQI message.

### *The Timing*

The communication plan is an integral component of the organization's CQI Implementation Plan. All communication activities should be designed to support specific steps in the bigger plan and be scheduled and delivered accordingly.

Planning to ensure that the right information and right messages are given at the right time is essential. For example, overselling what CQI can do at the beginning, particularly without action and substantiation, can damage the credibility of the process. On the other hand, too little information may give the process a cloak of secrecy or not provide enough visibility to generate and convey the sense of excitement and momentum necessary to keep the process alive.



*Right information*



*Right messages*



*Right time*



### **A SUCCESSFUL PLAN: A SUMMARY**

A successful communication plan:

- ☒ Is tailored to the culture of a particular organization.
- ☒ Is based on an accepted central message, and provides a clear vision of the desired future of the organization towards which the organization is evolving.
- ☒ Links CQI to other key strategic initiatives and business processes of the organization.
- ☒ Uses existing channels of communication whenever possible.
- ☒ Focuses as much on the actions of managers as it does on the words.
- ☒ Provides information on CQI in action, by reporting results, successes, and lessons learned.
- ☒ Provides for two-way communication, to put the principles of employee involvement and democratization of the workplace into practice.

The communication plan and each of the activities in the plan require ongoing evaluation to determine whether the actions undertaken have made any difference in terms of informing, explaining, motivating, involving all employees and changing the culture of the organization.



## HUMAN RESOURCES

### IMPLICATIONS OF CQI



Models of quality management invoke activity throughout the organization. For any CQI initiative to be successful in a complex environment such as health care, there must be an adequately conceived plan for human resource development and support that is consistent with the activity undertaken. While CQI may involve transformations in philosophy, culture and attitude, it also must involve new skills, new methods, new expertise and additional roles that have not previously been built into the organizational framework.

#### *New Strategies*

The success of any CQI initiative will depend on the degree of staff involvement, commitment and skill in shaping a new working environment. Priority projects on quality will need new teams using new tools to create solutions and improvements. A new style of leadership, and in fact new leaders, should emerge to address these challenges. Human resource plans may need to include a strategy for team building, project management training, and incentive/recognition programs to support the overall CQI effort.

Continuous quality improvement has human resource implications at many points in the organization where time demands go beyond brief training. The following is a summary of potential areas of impact and questions that may need to be addressed as they specifically relate to CQI involvement.

- ♦ Are there specific ongoing responsibilities for team, consultant or project management, and how are these responsibilities best delegated?
- ♦ Are medical and nursing managers allocated sufficient time to undertake in-depth training and lead quality planning and improvement tasks with their staff?
- ♦ What mechanisms exist to attract a number of clinical leaders to part-time, half-time, or full-time roles (depending on the size of the organization) in quality improvement?



- ◆ Are expert clinical investigators being encouraged to study clinical indicators and outcomes that can be used to assess the effectiveness of care?
- ◆ How many person years does the Information Services & Technology group need to develop and maintain a quality database?
- ◆ Does there need to be a team of records specialists who abstract important quality indicators from all records on a daily basis?
- ◆ Is there a need for one or several quality management specialists within the organization, and are they best placed in support of clinical services or administrative services?
- ◆ Is there a need for technical staff in process/outcome analysis?
- ◆ As technologies for education and training for CQI in health care expand (tapes, satellite conferences, specific interactive workshops), is there a need for in-house quality educators and additional educational material?
- ◆ Is education available through external programs directed through professional organizations, universities or consultant groups?
- ◆ Is Human Resources involved in staffing strategies necessary to implement continuous quality improvement? Are there needs for staff with different characteristics or expertise in the CQI environment? Are there ways for the credential review process to encourage quality of care experience?

This is not an exhaustive list of human resource implications of CQI, but it is important that such questions be clearly addressed at the outset of quality planning. To successfully implement a major long term quality initiative, a well-conceived human resource plan must be addressed; otherwise quality objectives may not be realized or sustained, as initial gains may be lost if staff are not adequately prepared or supported.

### ***Smaller Organizations***

Smaller facilities or agencies may have special needs in human resources for CQI. While they may not have the luxury of assigning specialists to CQI tasks, they may have the advantage of more flexibility and closeness to the community, the patient and the "customer." Similarly, small professional groups should not feel that they are at a major disadvantage because specific quality projects can be identified by any group, and sometimes even small changes have considerable impact on customer satisfaction and a sense of accomplishment by staff.



## WAYS TO SUPPORT CLINICAL STAFF IN CQI

### *The Critical Element*

There is consensus that a critical element, perhaps *the* critical element, in improving quality in the health system is the constructive involvement and support of clinical staff—the physicians, nurses and other health professionals who are responsible for providing direct care services to patients. Berwick et al (1990) reviewed general factors that encourage physician support, such as focusing on priority clinical problems and offering practical tools for analysis and change.

### *Physician Involvement*

In the Canadian context, the incentives for physician involvement should be addressed directly by the institutions involved. One basic difference between physicians and other staff is likely to be method of payment. Physicians who are completely reimbursed through provincial insurance plans on a fee-for-service basis may need to negotiate sessional or salaried arrangements with institutions if there is to be a major time commitment to Quality Management. Successful examples are evolving in the USA where interested clinicians are hired on a part-time basis to lead clinical CQI initiatives. A number of Canadian facilities are now identifying specific quality management responsibilities for physicians and building them into compensation arrangements. Such investments in quality roles can produce considerable gains in staff education and support for quality, and reap direct benefits in effectiveness, efficiency and patient satisfaction.

### *Committee Meetings*

A common source of staff frustration—too many committees and meetings—may provide another opportunity for quality improvement. If committee outcomes can be reviewed with the result of considerably reducing the number of committees, there is likely to be a benefit in staff acceptance of time for specific quality training and project work. A number of facilities have drastically reduced standing committees that may not contribute to quality improvement, and established project teams that address solutions with more potential for quality gains.

### *Infrastructure*

Another practical mechanism that can encourage involvement by medical departments is to assign research and project coordinators who can provide the supportive infrastructure for improvement priorities that emerge from the clinical areas. These coordinators are essential in studying processes, tracking outcome indicators and developing reports on progress.



With adequate time allocation and supportive infrastructure built into its quality plan, the organization will increase the likelihood that significant gains in quality are achieved.

#### **TIPS FOR INVOLVING PROFESSIONAL STAFF IN CQI**

- ◆ Appeal to the scientific training and professional pride that physicians and clinical staff have as a result of their education, training and experience.
- ◆ Keep meetings short with well-planned agendas that include the purpose and objectives of the meeting.
- ◆ Give physicians concrete case-type data (e.g. CMG) but without physician identifiers.
- ◆ Emphasize confidentiality.
- ◆ Involve physicians and other clinical staff early to gain consensus.
- ◆ Make time commitments minimal and clear.
- ◆ Be honest with no secret data.
- ◆ Serve food at meetings.
- ◆ Keep discussions focused on what is best for patients and families rather than on costs or administration.
- ◆ If possible, provide incentives such as professional development funds.
- ◆ Emphasize improvements in care and mutual trust in the partnerships of hospital and physicians.
- ◆ Direct attention to flawed processes rather than to individuals.
- ◆ Recognize and celebrate success.

R.H. Wensel, MD, FRCP(C)  
Health Care Consultant  
Edmonton, Alberta



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### PHYSICIAN LEADERSHIP

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#### *Leading and managing*

Leadership is focused on producing needed change. Management, on the other hand, is working with people and processes to produce predictable results. "One is not superior to the other, but we need physicians who can both lead and manage."

#### *Learning new skills*

Receiving the mantle of leadership does not confer the ability to lead a team meeting, map a care process, or develop and manage a budget. These and many other high-level skills must be learned in order to be effective in improving quality of care for patients.

#### *When asked to lead*

- ◆ Establish alignment toward a shared aim.
- ◆ Become process-literate.
- ◆ Drive out fear.
- ◆ Improve oneself.
- ◆ Speak from the heart.

(Adapted from Reinertsen, 1998)



## EDUCATION

*We need to shape it [quality improvement] to our culture and to our facility, and we all need to know that we are learning together.*

— Arnold, 1993

### **Knowledge and Skill Issues**



One of the lessons learned by many of the health care organizations that have pioneered the implementation of CQI has been the need for extensive and continuous education and training programs. "Leaders need training in fundamental concepts, strategic planning, and technical methods; managers need on-site training to guide implementation; teams need 'just-in-time' training in basic tools; and local experts (sometimes called 'facilitators' or 'coaches') need training and pathways for career development to equip them to assist their institutions to change" (Berwick et al, 1990).

The education program developed or acquired by the organization needs to address both knowledge-based and skill-based training issues. Staff require education to gain a body of knowledge in the concepts and principles of CQI, and the theory upon which individual and team skills development will be based.

### **AN EDUCATION PLAN**

An education and training plan addresses issues such as:

- ♦ What are the knowledge and skills development needs of staff?
- ♦ Who will be trained to facilitate the training program and classes?
- ♦ Who will receive this training?
- ♦ What is the most appropriate timing for such training?





## KNOWLEDGE

The knowledge that needs to be transferred to all staff should be directed to answering questions such as:

- ◆ Why change at all?
- ◆ What is the need for change within the Canadian health care system in general, and the individual institution in particular?
- ◆ What is the definition of quality? What is the cost of quality?
- ◆ Why concentrate on prevention rather than inspection?
- ◆ What are customer expectations and why is the customer focus so important?
- ◆ What is a work process?
- ◆ Why is a process focus so important to continuous quality improvement?



The education draws on techniques used in measuring and evaluating processes. Statistical tools are used to help staff understand processes as they are currently set up and to identify and measure the variation in processes so that improvements can be made. Tools such as pareto charts, flow diagrams, cause-and-effect (or fishbone) diagrams, trend and control charts, histograms, and scatter diagrams all help transform complicated data into powerfully simple visual charts.

*It is possible and desirable for everyone in the organization to utilize the scientific method of improving processes as part of their daily activity. Quality Management intends to place scientific tools for process improvement within the grasp of every single employee.*

— Berwick et al, 1990



## SKILLS TRAINING

The implementation of CQI in an organization requires a cultural metamorphosis. Such change within any organization requires behavioural changes at all levels of staff. The abilities of staff to work in this new environment and their skill levels in interpersonal relationships, communication, team-building and problem-solving are critical factors in successful implementation of a CQI initiative. A well-researched and proven approach to skills training is behavioural modelling, where the



focus is on behaviour rather than knowledge. Behavioural modelling involves a four-step process, which includes introducing a set of "key actions" or "action steps" with respect to a given skill, showing examples (both positive and negative) of the skill being used, practising the skill using a real job-related situation, and providing constructive feedback for reinforcement and improvement of the skill.

A skills training program should consider the following components:

- ◆ Personal skills
- ◆ Team effectiveness skills
- ◆ Quality control tools
- ◆ Process improvements





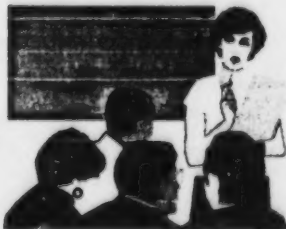
## PERSONAL SKILLS

*The change [managers] are being asked to make is not marginal; it is fundamental. It demands the commitment of the many, not the few. Its nature is revolutionary, not evolutionary. It cries out for leaders, not managers, to effect the transformations required by most organizations.*

—Tichy and Devanna, 1986

The strength of the internal customer-supplier chain depends heavily on the strength of personal skills across the organization. These include not only technical and job-related skills, but also personal leadership skills that are used in dealing with colleagues, suppliers, and customers (internal and external). These skills include the ability to communicate effectively, to plan, to negotiate, to resolve issues, to build strong relationships, and to be part of a team. These skills are in support of the movement toward participation, collaboration, staff involvement and empowerment.

As staff roles and expectations shift, the roles and responsibilities of front-line supervisors and managers must also evolve. This is an evolution to more coaching/facilitating roles for middle management. The skills required for these evolving roles include the ability to clearly identify new standards of accountability and follow through to sustain momentum, encouragement and reward of improvement efforts, and being able to provide constructive feedback and corrective support.



As the manager's role evolves to that of a teacher, the skills of teaching and facilitating learning are expected. Discovering ways to explain quality concepts, using real examples and involving staff in a learning experience are the focus of this training.



## TEAM EFFECTIVENESS SKILLS

*Input and involvement from different departments and disciplines must be routinely incorporated as part of the organizationwide process-improvement philosophy.*

— Eskildson and Yates, 1991

Individual staff members applying quality improvement tools can make a significant difference in an organization; however, rarely does a single staff member have the knowledge and experience to understand every step of a work process. It is for this reason that major gains in quality are achieved when a team is formed to study complex, cross-functional problems. The skills of turning a group into a highly functioning team include clarifying roles, running effective meetings, handling disruptive behaviour and building commitment (see Figure 2 on following page).

Problem-solving skills are also fundamental as an organization moves toward greater involvement of employees in identifying problems and solutions and listening and responding to customer needs and expectations. Effective problem solving involves a series of steps that build on each other. The active involvement of many other people is often required to discover the real problem, analyze it and determine what to do about it.

Quality management starts and ends with the customer. Team skills need to be developed to identify who you serve, assess how well you are serving customers, and determine ways of measuring the extent to which customer needs and expectations are met.



### THE ART OF BRAINSTORMING

- ♦ A way to generate ideas with a team
- ♦ Can be formal and structured, or informal.
- ♦ Gather as many ideas as possible from everyone, without spending a lot of time
- ♦ Sort ideas by category, and decide which ones will be the focus of next steps.



**Figure 2: TEAM DEVELOPMENT**

STAGES	PROCESS
<b>Forming</b>	The team gets acquainted; there might be confusion about the tasks. A "team charter" is most helpful to clarify roles and responsibilities.
<b>Storming</b>	Without the clarity of a team charter, tension may develop (overt and/or covert); the team may experience frustration and confusion about the tasks; there may be conflict.
<b>Norming</b>	Team members begin to come together, they appreciate other's strengths and what each member contributes to the team.
<b>Performing</b>	The team is characterized as high achieving.
<b>Adjourning</b>	The team has completed its project.



## TOOLS FOR TEAM PLANNING

"Healthcare providers require a new approach to planning. Bringing together multiple interests and different perspectives requires a collaborative approach that uses consensus-building and draws upon members' strengths" (Handyside and Parkinson, 1999).

Handyside and Parkinson (1999) suggest the following management and planning tools to enable teams to formulate plans and take the action needed to design new ways to meet healthcare needs:

1. **Affinity Diagram:** Used to generate ideas and organize complex issues. Affinity diagrams enable a team to generate a large number of ideas and issues, and summarize the material under natural groupings.
2. **Interrelationship Digraph:** Illustrates relationships among ideas, issues and symptoms that often suggest where to begin on a project or problem and how a team can measure success.
3. **Tree Diagram:** Facilitates the identification of all the actions that are required to achieve a goal. The tree diagram is useful for any plan in which the complexity requires the identification and organization of many tasks.
4. **Prioritization Matrices:** Makes the decision-making process visible by using criteria and a systematic way to compare all options. This systematic method not only increases the likelihood of making the right choice, it helps team members discuss and resolve differences in opinion and builds consensus and agreement.
5. **Matrix Diagram:** Provides a method for comparing, correlating and summarizing information. Matrices are useful for summarizing a plan and can include information such as the responsibilities of team members for tasks and objectives, and the relationships between customer requirements and service or product design features.
6. **Process Decision Program Chart:** Guides the identification of potential problems and the design of preventive or mitigating actions that are then incorporated into the plan.
7. **Activity Network Diagram:** Provides teams with a systematic method for determining a project schedule and the sequence of tasks.



## QUALITY CONTROL TOOLS

The most popular descriptive tools used in understanding a process are the following:

- Scatter diagrams (two variable relationships)
- Run charts (short-term time variations)
- Flowcharts (graphical depiction of process flows)
- Histograms (measurement variations)
- Control charts (process fluctuations over time)
- Cause and effect diagrams (factors influencing output)
- Pareto charts (frequency of events/causes/errors in various aspects of a process)

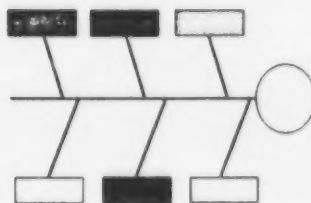


### *Analysis of Process*

These and other data description tools can be taught and used by staff in the pursuit of quality improvement. It is easy to see that, even though an evaluative strategy may seem overly exhaustive, it provides a thorough analysis of a process. Often the results are right under our noses and so obvious that the efforts invested in reaching such a conclusion may seem unwarranted.

### *Interdepartmental Understanding*

It is important to note that, unlike traditional efforts toward improvements, this strategy improves the interdepartmental understanding of how the inputs and outputs of the process affect customers and provides a logical, statistically sound foundation for system changes. The traditional methods often do not offer such a basis as they are founded on speculation or personal perceptions that may not necessarily take into consideration all stakeholders.





### KEY SUGGESTIONS FOR RAPID IMPROVEMENT

**Identify the right problem.** Spending more time identifying the problem will result in saved project time in the long term.

- ◆ Postpone benchmarking when problems are obvious.
- ◆ Define the problem in terms of customer experience.
- ◆ Communicate with the rest of the organization from the start.
- ◆ State the problem from different perspectives.
- ◆ Break large problems into smaller components.

**Have rapid meetings.** Much time is wasted in meetings and any improvement in this area is welcomed.

- ◆ Choose a non-participating facilitator.
- ◆ Meet before the meeting.
- ◆ Postpone evaluation of ideas.
- ◆ Think it through again.

**Plan rapidly.** Reduce time spent on flowcharting the process description by focusing on the future.

- ◆ Start at the end. Focus on the future.

**Collect data rapidly.** Considerable time is spent collecting data; several steps can be taken to reduce these delays.

- ◆ Plan for rapid data collection.
- ◆ Collect only data items needed.
- ◆ Sample patients.
- ◆ Rely on numerical estimates made by process owners.

**Make rapid whole-system change.** Many well-thought-out changes are never adopted throughout the organization. Steps to expedite organizationwide adoption include:

- ◆ Change membership on cross-functional teams.
- ◆ Get outside perspectives.
- ◆ Use unfolding storyboards and other media.
- ◆ Go beyond self-interest.

(Adapted from Alemi et al, 1998)



## PROCESS IMPROVEMENTS

There is an array of tools that complement those for making process improvements. In most instances the tools will be simple enough to allow staff to gain some confidence with their use, but some of them require extensive statistical background and experience to be effectively applied. The role of in-house facilitators and educators becomes evident with the need for using different tools or clarifying the use and interpretation of those already being applied.

With a vast array of tools available, it is imperative that competent planners, educators and facilitators be available to the staff working on a process. It is here that the role of experienced statisticians, trained facilitators, and experienced consultants can be invaluable in developing an appropriate evaluation strategy and maintaining the quality improvement momentum.

### PROCESS MAPPING

Process mapping is a tool to diagram the flow of the process from customer need to customer satisfaction. The basic steps to mapping are:

- ◆ Assign a process mapping facilitator.
- ◆ Select the process.
- ◆ Select the team.
- ◆ Define the objectives of the project.
- ◆ Set the boundaries for the project.
- ◆ Map primary process.
- ◆ Assess customer needs.
- ◆ Consider alternative paths.
- ◆ Use the map to improve the process.
- ◆ Review.

(Bissell, 1999)



## **FOOD SERVICE DELIVERY SYSTEM**

*Huron-Perth Hospitals Partnership  
Perth, Ontario*



In April 1997 a commissioned study reviewed Huron-Perth Hospitals and Related Health Services. It developed recommendations for region-wide restructuring. The goals were to develop efficiencies through new administration and governance structures and to achieve a system-wide approach to program planning and delivery. The study indicated that a commitment must be made to achieve a minimum savings of \$10.4 million with at least \$3.4 million of the savings coming from the consolidation of administrative and support services. The study outlined a "preferred option" which highlighted the need for a single administrative and support structure for Huron-Perth. From this recommendation, the "Administrative Working Group" was formed. This group formed the solid foundation on which the Huron Perth Hospitals Partnership was founded.

Several project teams were assembled to review the feasibility of consolidating various support services. The Nutrition and Food Services Project Team began meeting on April 23, 1997 in an effort to analyze food service operations in the eight hospitals in Huron and Perth Counties. The team was comprised of food service managers, union, non-union and human resources representatives.

Current food service systems and proposed new systems were evaluated using cost and quality benchmarks. The team identified ten options that ranged from improving current practices, to the purchase of outsourced trays. By evaluating each option against a Balanced Scorecard and a set of qualitative questions, the team ultimately adopted a "Hostess-Style Service".

Hostess-Style Service utilizes standardized practices, central management, bulk rethermalization, sourced food and computerization. The meals are served at the patient's bedside, or in a dining application using rethermalization and support carts. This new process had an important side product. Food service workers were now empowered to communicate directly with their customers (the patients) to provide a quality process. From the approval of the concept in October 1997 to its implementation, using a staggered timetable of adoption, a period of 6 to 12 months elapsed.



*The Nutrition and Food Services Project Team exhibited the following outstanding qualities:*

- *Dynamic and positive leadership during the initial stages – moving from eight individual hospitals to a unique partnership of eight hospitals*
- *Demonstrated substantial savings while maintaining a documented quality service*
- *Innovative application of technology*
- *Point of service menu choice*
- *Unique approach to hospital food service delivery system*
- *Partnership with manufacturer to develop a support cart specific to patient and staff needs*
- *Evaluation based on objective criteria*
- *Responsive to patient comments throughout implementation*
- *Detailed analysis and implementation*
- *Changed core business from food production to food service*
- *Achieved implementation time line within projected costs*
- *Significant role in maintaining individuality of eight hospitals*

*Throughout the analysis, implementation and evaluation phases, this team has demonstrated a high level of professional and personal commitment to achieve the "Hostess-Style Service" vision. They have exemplified the statement, "Believe in what you are doing – or don't do it." Goals have been met, efficiencies have been achieved and the team continues to evolve and grow.*

**See Appendix C for contact information.**



# INDICATORS



PART FIVE







## Overview

*Indicator development has increased over the past decade. This section provides current definitions and examples, and highlights progress made by the Canadian Institute for Health Information (CIHI), as well as the integration of indicators into the Canadian Council on Health Services Accreditation (CCHSA) accreditation program.*







## INDICATOR DEVELOPMENT

*... Indicators should actually measure what they are intended to (validity); they should provide the same answer if measured by different people in similar circumstances (reliability); they should be able to measure change (sensitivity); and, they should reflect changes only in the situation concerned. In reality, these criteria are difficult to achieve, and indicators, at best, are indirect or partial measures of a complex situation.*

— Alberta Heritage Foundation for Medical Research, 1998

### DEFINITIONS



*An indicator is a measurement tool, screen or flag that is used as a guide to monitor, evaluate and improve the quality of client care, clinical services, support services and organizational functions that affect client outcomes (Canadian Council on Health Services Accreditation [CCHSA], 1996).*

*A clinical indicator is a measurement tool—an instrument that is used to assess a measurable aspect of patient care as a guide to assessing performance of the health care organization or individual practitioners within the organization (Marder, 1990).*

*In the preamble to the World Health Organization Constitution, health has been defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”*

*Health Indicators are measures used to describe the state of health and well-being of the population (health status indicators), and the factors that determine or influence health (health determinant indicators). Examples of health status indicators are years in good health, subjective self-ratings of health, and functional status. Examples of health determinant indicators are behaviour and lifestyles, coping skills and socio-economic status.*



**Health System Output Indicators** describe the results of processes that were completed as designed to address program or service objectives. Examples of output indicators are average daily cost per home care client or average length of hospital stay.

**Health System Outcome Indicators** measure changes in health status or health determinants that can be attributed to a program or service. An example of outcome indicators is the change in functional status of home care clients attributable to program outputs.

### MORE DEFINITIONS

An *outcome* indicator measures the extent to which a desired change, effect or result was achieved for the client.

*Technical quality* indicators measure the quality of care or service from the perspective of the professional or provider.

*Service quality* indicator is a measure of the extent to which the team delivers service in accordance with expressed or implied promises to its clients.

*Client/Patient satisfaction* indicator is the clients' scoring of their experience of the care or service they received. It is closely related to their personal expectations of the experience.

*Staff participation* indicator is intended to measure the commitment of the health facility to its staff and the commitment of staff to their work, team and employer.

— Wilson, 1999



## LEADERSHIP

As new interest focuses on the use of health indicators and outcome measures, consensus is emerging on the indicators that are most meaningful.

### *Developing Indicators*

In developing and defining indicators it is important to link a concept to an observation that can be collected in an information system. Enormous quantities of data are relatively easy to access; however, rather than simply using the data that are currently available and letting those shape the questions which are asked, it is important to first set the priorities and identify the major health objectives and strategies (Alberta Heritage Foundation for Medical Research, 1998).

Key questions are: Who needs the information? For what purpose? Different sets of indicators reflect different focuses. Work is needed in each area of indicator development: at the health care system level (e.g. population health), as well as regional, organizational and team levels.

Leadership in indicator development is provided by national and international bodies involved in health care quality. In Canada these include the CCHSA and CIHI. Others are the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the National Committee for Quality Assurance (NCQA) in the United States, and the European Clearing House on Health Outcomes (ECHHO).

The current work of the Canadian Institute for Health Information (CIHI) supports measurement at the "macro" health system and regional levels.

CIHI states: "The advantage of a system of indicators is that it provides a series of recurring valid and reliable data, which can be used in analyses that focus mainly on two essential dimensions: variations over time and from place to place."

- ◆ Indicators allow comparisons to be made between health care facilities across local, provincial and national boundaries when they meet the essential statistical tests of validity and reliability.
- ◆ When new participants adopt established benchmark indicators, they are able to follow the measurement protocol of those indicators.



### **Health Indicator Framework**

CIHI has launched a "collaborative process to identify what measures should be used to report on the health of Canadians and the health system - and then to share this information with Canadians from coast to coast."

The indicators are primarily intended to support regional health authorities in monitoring progress in improving and maintaining the health of the population, and the indicators should assist with reporting to governing bodies, the public, and health professional groups.

The Health Indicators Framework includes:

- health status
- non-medical determinants of health
- health systems performance
- community and health system characteristics

<b>HEALTH STATUS</b>		
<b>Deaths</b>	A range of age-specific and condition specific mortality rates, as well as derived indicators (e.g. life expectancy and potential years of life lost).	<ul style="list-style-type: none"> <li>• Perinatal deaths</li> <li>• Life expectancy</li> <li>• Circulatory deaths</li> <li>• Cancer deaths</li> <li>• Respiratory deaths</li> <li>• Infant mortality</li> </ul>
<b>Health Conditions</b>	Alterations or attributes of the health status of an individual which may lead to distress, interference with daily activities, or contact with health services; it may be a disease (acute or chronic), disorder, injury or trauma, or reflect other health-related states such as pregnancy, aging, stress, congenital anomaly, or genetic predisposition (WHO).	<ul style="list-style-type: none"> <li>• Arthritis</li> <li>• Diabetes</li> <li>• Asthma</li> <li>• Food and waterborne diseases</li> <li>• Depression</li> <li>• Chronic pain</li> <li>• Obesity</li> </ul>
<b>Human Function</b>	Levels of human function are associated with the consequences of disease, disorder, injury and other health conditions.	<ul style="list-style-type: none"> <li>• Activity limitation</li> <li>• Health expectancy</li> <li>• Functional health</li> </ul>
<b>Well-Being</b>	Broad measures of the physical, mental, and social well-being of individuals.	<ul style="list-style-type: none"> <li>• Self-esteem</li> <li>• Self-mastery</li> </ul>



<b>NON-MEDICAL DETERMINANTS OF HEALTH</b>		
<b>Health Behaviours</b>	Aspects of personal behaviour and risk factors that epidemiological studies have shown to influence health status.	<ul style="list-style-type: none"> <li>• Smoking rate</li> <li>• Youth smoking rate</li> <li>• Regular heavy drinking</li> <li>• Physical activity</li> </ul>
<b>Living and Working Conditions</b>	Indicators related to the socioeconomic characteristics and working conditions of the population, that epidemiological studies have shown to be related to health.	<ul style="list-style-type: none"> <li>• High school and post-secondary graduation</li> <li>• Unemployment rate</li> <li>• Long-term and youth unemployment</li> <li>• Children in low income families</li> </ul>
<b>Personal Resources</b>	Measures the prevalence of factors, such as social support and life stress, that epidemiological studies have shown to be related to health.	<ul style="list-style-type: none"> <li>• School readiness</li> <li>• Social support</li> <li>• Life stress</li> </ul>
<b>Environmental Factors</b>	Environmental factors with the potential to influence human health.	

<b>HEALTH SYSTEM PERFORMANCE</b>	
<b>Acceptability</b>	All care/service provided meets the expectations of the client, community, providers and paying organizations.
<b>Accessibility</b>	The ability of clients/patients to obtain care/service at the right place and the right time, based on respective needs.
<b>Appropriateness</b>	Care/service provided is relevant to the clients'/patients' needs and based on established standards.
<b>Competence</b>	An individual's knowledge and skills are appropriate to the care/service being provided.
<b>Continuity</b>	The ability to provide uninterrupted, coordinated care/service across programs, practitioners, organizations, and levels of care/service, over time.
<b>Effectiveness</b>	The care/service, intervention or action achieves desired results.
<b>Efficiency</b>	Achieving desired results with most cost-effective use of resources.
<b>Safety</b>	Potential risks of an intervention or the environment are avoided or minimized.



COMMUNITY AND HEALTH SYSTEM CHARACTERISTICS	
Characteristics of the community or the health system that, while not indicators of health status or health system performance in themselves, provide useful contextual information.	<ul style="list-style-type: none"><li>• Population count</li><li>• Doctors and nurses per capita</li><li>• Hip replacement</li><li>• Knee replacement</li></ul>

*Where possible, the framework's thematic dimensions are aligned with those used in other ongoing initiatives. For example, some of the dimensions in the Health Status category are based on concepts from the World Health Organization's (WHO) International Classification of Functioning and Disability (ICIDH-2, Beta 2 Version). Similarly, the dimensions in the Health System Performance category reflect those currently used by the Canadian Council on Health Services Accreditation (CCHSA).*

— CIHI, 1999

Further information on the Framework and Indicators can be obtained online at <http://www.cihi.ca>.



## INTEGRATING INDICATORS INTO THE ACCREDITATION PROGRAM

One of the goals of the Achieving Improved Measurement (AIM) accreditation program is to identify a common list of indicators that, in conjunction with the accreditation standards, can be used to support health services organizations in self-assessment and quality improvement activities.

- ◆ By identifying a common list of indicators, the Canadian Council on Health Services Accreditation (CCHSA) hopes to facilitate the exchange of comparable data across Canada and promote benchmarking across accredited organizations.
- ◆ Because CCHSA's standards cover all aspects of organizational performance, indicators will be identified for all levels of care and service including clinical areas, governance and management functions and support areas such as human resources management. [To assist in development of indicators CCHSA has published "A Guide to the Development and Use of Performance Indicators".]
- ◆ Selection of indicators will be informed by current indicator initiatives taking place across Canada through CIHI, the Ontario Hospital Association (OHA), HealNet, and provincial ministries.

### THE FOUR QUALITY DIMENSIONS

#### *Responsiveness*

The organization anticipates and responds to changes in the needs and expectations of the (potential) client and/or community population(s), and to changes in the environment.

#### *System Competency*

The organization consistently provides service(s) in the best possible way, given the current and evolving state of knowledge. The organization achieves the desired benefit for clients and/or communities, with the most cost-effective use of resources.

#### *Client/Community Focus*

The organization strengthens its relationship with the client and/or community by encouraging community participation and partnership in its activities.

#### *Work Life*

The organization provides a work atmosphere conducive to performance excellence, full participation, personal/professional and organizational growth, health, well-being and satisfaction.

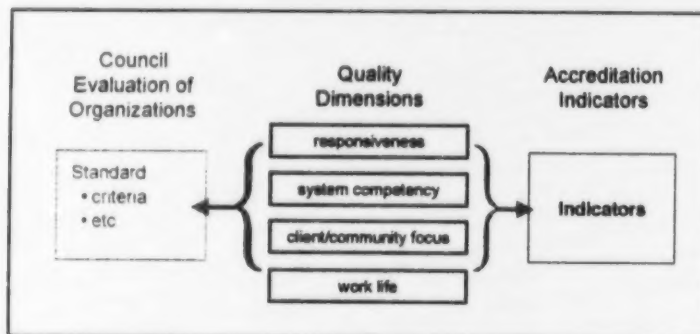


### ***Link Between Indicators, Quality Dimensions and Accreditation Standards***

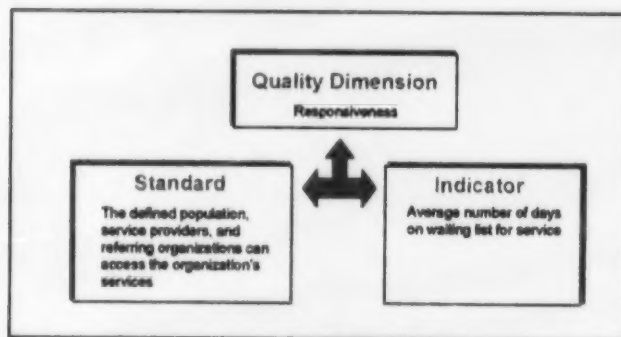
The basis for the AIM standards and indicators is CCHSA's quality dimensions. These four quality dimensions have been identified as responsiveness, system competency, client/community focus and work life.

- ◆ Each indicator will be linked to a standard and a quality dimension (see Figures 1 and 2).
- ◆ Indicators to be identified will be published with the accreditation standards.
- ◆ Use of indicators will be voluntary

**Figure 1. LINK BETWEEN CCHSA STANDARDS, QUALITY DIMENSIONS AND INDICATORS**



**Figure 2. EXAMPLE OF A STANDARD, QUALITY DIMENSION AND INDICATOR**





### ***Accreditation, Indicators and Quality Improvement***

CCHSA supports the use of indicators within the larger framework of quality improvement.

- ◆ Measurement and reporting of indicators should challenge teams and organizations to provide better services, which in turn result in improved health.
- ◆ Indicators are seen as a guide to monitor, evaluate and improve services delivered. Indicators are neutral. Their sole purpose is to provide information. An in-depth analysis by the team or users is essential to determine what the indicator data mean in terms of understanding processes.

Organizations must have measures that will assist them to understand their processes in order to improve them.

- ◆ What does the indicator data tell staff about their processes?
- ◆ How do they determine whether their organization's performance was satisfactory or whether there were opportunities for improvement?

Accreditation offers a framework that links goals, processes of care and service and indicators. This framework can help teams and organizations to focus evaluation, quality monitoring and improvement activities.

- ◆ Indicator data provide the organization and the CCHSA's surveyors with one more source of information to help them understand the organization's processes.

### ***CCHSA's Use of Indicator Data***

- ◆ CCHSA will not use indicators to make judgements about an organization's quality of care and service in isolation of the organization's particular circumstances. The focus is more on the team's or organization's use of the information to evaluate and improve processes and outcomes.
- ◆ At a national level, CCHSA will use the indicator data to understand the trends in compliance with the accreditation standards.
- ◆ By understanding the relationship between indicator data and organizational performance, CCHSA can assist organizations to improve through education and supporting guidelines.

*Indicators are neutral. Their sole purpose is to provide information.*

For further information on Indicator Development, see Appendix E.





## INDICATORS FOR COMMUNITY HEALTH

### *Health Indicator:*

*Safety and health promotion, risky behaviour, and lifestyle*

### **Measures include:**

- |                         |                           |
|-------------------------|---------------------------|
| ▪ seat belt use         | ▪ exercise                |
| ▪ immunization          | ▪ influenza vaccine       |
| ▪ helmet use            | ▪ smoking cessation       |
| ▪ blood pressure checks | ▪ mammograms              |
| ▪ cholesterol checks    | ▪ prenatal care/education |
| ▪ parenting classes     | ▪ family planning         |
| ▪ cervical cancer exams | ▪ weight checks           |
| ▪ contraception use     | ▪ oral health             |
| ▪ screening             | ▪ smoking                 |
| ▪ alcohol use           | ▪ drug use                |
| ▪ poor nutrition        | ▪ risky driving           |
| ▪ violent behaviour     | ▪ abusive behaviour       |
| ▪ bulimia               | ▪ child abuse             |
| ▪ school dropout        |                           |

—Speroff, Miles and Mathews, 1998



## INDICATORS FOR HEALTH REGIONS

Health Regions need to be able to measure the baseline health of their populations and the impact of the health system on that baseline. Key indicators alert health planners and policy makers to potential issues and enable them to ask further questions that lead to important decisions about the management of health. The S.E.A.R.C.H. Health Indicators project makes a contribution toward the development of a common core of health indicators for Alberta. A standard set of indicators would allow for assessment and monitoring of the overall health of Albertans and allow for cross-regional comparisons. This would enhance the usefulness of indicators in policy development, service planning and evaluation.

— Alberta Heritage Foundation for Medical Research, 1998



## LONG TERM CARE INDICATORS

The Minimum Data Set (MDS) approach has been adopted in several countries as a basis for assessing quality of care in long term care settings and assisting in care planning. Use of this approach has led to improvements in at least some dimensions of care.

Chouinard (1999) suggests that the Minimum Data Set is a good first step, but it fails to link defined outcomes to specific processes of care. A sound approach would yield at least semi-qualitative estimates of the impact of, for example, skin care and nutritional support on the prevalence of bed-sores. "A methodological approach such as total quality management allows clinicians to be involved in determining just what processes need to be measured and what the appropriate, clinically valid outcomes are."



### A CANADIAN EXPERIENCE

*The Resident Assessment Instrument (RAI) was designed to provide a standardized assessment of nursing home residents.*


*Ontario has implemented the Resource Utilization Groups III (RUGIII) patient classification system, based on assessment data collected with the Ontario version of the Minimum Data Set (MDS) component of the RAI system. As of July 1, 1996, the Minimum Data Set (MDS) component of the RAI was mandated by the Ministry of Health of the Ontario Government for use as the assessment instrument for all residents in chronic care institutions, and the Canadian Institute of Health Information (CIHI) became the centralized data base for submission of completed MDS assessments. The year 2000 will see the use of the RUG III funding methodology for designated chronic care beds.*

*Following a government mandate to use the assessment portion of the Resident Assessment Instrument, Sunnybrook and Women's College Health Sciences Centre (S&WCHSC) began to integrate the RAI into the care of its Aging Program residents. The Centre has used this as an opportunity to provide a structure for assessment and care planning within the existing philosophy of Patient Focused Care.*

*This screening tool assesses resident characteristics over a wide spectrum of dimensions. Assessment findings are integrated into the clinical plan of care.*

*— Brunton and Rook, 1999*





### MDS QUALITY INDICATORS

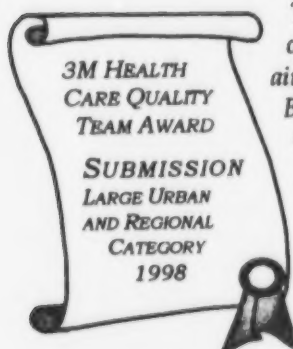
1. Prevalence of any injury
2. Prevalence of falls
3. Prevalence of problem behaviour toward others
4. Prevalence of symptoms of depression
5. Prevalence of depression with no treatment
6. Use of nine or more scheduled medications
7. Incidence of cognitive impairment
8. Prevalence of bladder/bowel incontinence
9. Prevalence of occasional/frequent bladder/bowel incontinence with no toileting plan
10. Prevalence of indwelling catheters
11. Prevalence of fecal impaction
12. Prevalence of urinary tract infections
13. Prevalence of antibiotic/anti-infective use
14. Prevalence of weight loss
15. Prevalence of tube feeding
16. Prevalence of dehydration
17. Prevalence of bedfast residents
18. Incidence of late-loss ADLs
19. Incidence of contractures
20. No training/skill practice of ROM for mobility dependent residents
21. Prevalence of antipsychotic use, in the absence of psychotic and related conditions
22. Prevalence of antipsychotic daily dose in excess of surveyor guidelines
23. Prevalence of anti-anxiety/hypnotic use
24. Prevalence of hypnotic use on a scheduled basis or PRN 2+ two or more times in the last week
25. Prevalence of use of any long-acting benzodiazepine
26. Prevalence of daily physical restraints
27. Prevalence of little or no activity
28. Lack of corrective action for sensory or communication problems
29. Prevalence of stage 1-4 pressure ulcers
30. Insulin-dependent diabetes with no foot care

— Hirdes et al, 1998



## FIRST BIRTHS: LOWERING THE CAESAREAN SECTION RATE

*Children's & Women's Health Centre  
of British Columbia  
Vancouver, British Columbia*



The First Births Project evolved as the first phase of a Continuous Quality Improvement project aimed at "Lowering the Caesarean Section Rate at British Columbia Women's Hospital and Health Centre," began in January of 1996. The target objective was to lower the caesarean section rate by 25% for nulliparous women, while maintaining maternal and infant outcomes, within 6 months of implementing solutions.

After mapping the process of care and brainstorming hypotheses that might contribute to the high caesarean section rate, the group selected four areas as the vital few. These were too early admission; fetal surveillance by electronic fetal monitoring; too early use of epidurals; and inappropriate induction. A chart audit supported the group's choices. Task forces were created in each area to use the best evidence and existing guidelines, as well as solutions from other hospitals to improve care at BC Women's Hospital. Guidelines and other strategies in all four target areas were implemented in the spring of 1997.

The project has been about working together to accomplish change in an environment of mutual respect. The process has been data driven as, without measurement, the effectiveness of any change is left to opinion. Hospital policies were created which were consistent with these changes. The project has also been about maintaining and consolidating the gains. This has been achieved through:

- an open and public evaluative process
- enrolment on a voluntary basis of nulliparous low-risk patients
- Nursing Team Leader confidential feedback
- monitoring newborn outcomes

The spirit of this initiative is Continuous Quality Improvement. It is about making gains in the quality of care and then holding them. In the first six months of implementation the process of continuous quality improvement has worked to create statistically significant change in all the target areas addressed. In this six-month period there were 50-60 nulliparous women who did not have a Caesarean Section, as compared with the previous year. This number is projected to 100 nulliparous women for the entire year. If these women choose to have another



*pregnancy, their chances of having a caesarean section in the next pregnancy will have been reduced from about 60% to about 5%.*

*The teams are continuing to meet and deal with other issues identified as potential opportunities for improvement. We expect that the First Births strategy will serve as an ongoing vehicle for introducing change concepts into the process of care at BC Women's and might be a template for the province.*

See Appendix C for contact information.

There are a number of standardized tools and instruments for measuring various components in health care such as the SF36, the FIM functional status tool, QWB London Handicap Scale, and the Hamilton Depression Scale. A discussion of instruments is available online at the Medical Outcomes Trust site: [www.outcomes-trust.org](http://www.outcomes-trust.org).



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# EVALUATION



PART SIX







## Overview

*This section discusses the significance of evaluation in CQI.*

*Analyzing organizational and team performance remains a challenge, given the difficulty in getting useful and timely information, linking this information to key issues and determining the changes needed to respond to this data.*

*A number of approaches are highlighted, including the clinical value compass, the balanced scorecard and the patient satisfaction survey.*

*The section concludes with a discussion of the complexity of measuring outcomes.*







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## APPROACHES TO ASSESSMENT

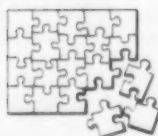
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*Trying to improve performance without measurement is wasteful since we will be uncertain about what to improve, and unable to assess whether our actions made a difference.*

G. Ross Baker

Associate Professor, Department of Health Administration  
University of Toronto, Toronto, Ontario

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Evaluation is crucial to the success of any CQI effort. Questions arise, however, as to how, where and when evaluation should occur. This section of the document highlights the major areas—techniques, pitfalls and reasons for the use of evaluation.

Principles and methods of continuous quality improvement are now considered integral to the operation of any health care practice or system. The impact of CQI may be measured in various ways: greater provider use of regional and national care guidelines and other accepted standards of care, improved health outcomes and satisfaction—along with traditional measures such as death rate, hospital readmission rate and length of stay; yet, despite the proliferation of CQI and other quality improvement initiatives, there remains no single method or standard by which to measure their effects (Philbin et al, 1996).

### ***Structure, Process, Outcomes***

The classic approaches to the assessment of quality were proposed by Donabedian (1980, 1982, 1996) two decades ago. The purpose of assessment is to pass judgement on the quality of health care, regardless of whether the care was provided by practitioners or institutions, implemented by patients, or used by the community. "Measurement in the classical sense—implying precision in quantification—cannot reasonably be expected for such a complex and abstract object as quality. What is needed is a set of reasonable and valid judgements." A judgement can be made about the quality of care by:

- examining the characteristics of the settings in which the care is provided (structure); this is an indirect assessment of care



- examining the attributes of the process of care
- examining the effects of care on the health and welfare of individuals or populations (outcomes)

*To assess the quality of medical care one must first unravel a mystery: the meaning of quality itself. It remains to be seen whether this can be done by patiently teasing out its several strands or whether one must, in despair, use a sword to cut the Gordian knot.*

— Donabedian, 1980

### ***Criteria for Selecting Meaningful Assessment Areas***

McGlynn (1998) suggests that in choosing clinical performance measures:

- ◆ The condition should have a significant impact on morbidity and/or mortality.
- ◆ The link between the measured processes and outcomes of care should have been established empirically.
- ◆ Quality in this area should be variable or substandard currently.
- ◆ Providers should be able to take clinically sensible actions to enhance performance on the measure.

### ***Criteria for Assessing Scientific Soundness***

Scientific soundness—the likelihood that a clinical performance measure will produce consistent and credible results when implemented—involves precision of specifications, adaptability and adequacy of risk adjustment (McGlynn, 1998).

### ***Interpreting Results***

Interpreting results is affected by the content of the measure and the audience. Measures that are clinically detailed and specific may be presented more generally to a consumer audience and in full detail to a clinical audience, but measures that are general by nature cannot be made more clinically detailed. Interpreting results entails statistical analysis, calibration of measures, modelling and presentation of information (McGlynn, 1998).



## BENCHMARKING

*Benchmarking can play an integral role in clinical improvement work and can stimulate wise clinical changes and promote improvements in quality and value.*

—Mohr et al, 1996

Benchmarking is an ongoing process of measurement and analysis that compares internal practices, processes or methodologies to those of other organizations (Crawford, 1998).

- ◆ Benchmarking is a systematic process to identify best practices.
- ◆ Benchmarks are statistical measures (Mohr et al, 1996).

Benchmarking, which shows that there may be a better process, stimulates interest in change. Organizations are able to accelerate the rate of improvement by learning from others and setting improvement goals based on real, demonstrated levels of performance.

*In health care, the key to benchmarking rests with understanding and improving the underlying processes and practices that drive quality, cost and clinical excellence. It helps to determine how other organizations have achieved exemplary performance and it suggests a method for adapting benchmark performance to one's own organization*

—Crawford, 1998

The National Quality Institute (NQI) has developed the *Canadian Quality Criteria* and the *Canadian Healthy Workplace Criteria*. The Canadian Awards for Excellence are awarded annually. See Appendix F for further information.



## WHAT TO EVALUATE

### *The Goals*

Clinicians and managers both seek information to support quality improvement within health care organizations:

- that can be analyzed to determine the techniques of patient care that yield the best results
- that can be used to identify opportunities for providers to improve their care of patients (Pine, 1991)

### *The Spectrum*

Evaluation under the umbrella of CQI impacts everyone from senior management and the board of directors to frontline staff. The reason for this wide spectrum is because of what has to be measured. Below is a basic list of areas that CQI evaluation affects with an organization:

- ◆ Planning assessments
  - effectiveness of the CQI planning process
  - implementation plan success
- ◆ Baseline assessments
  - appropriateness of organizational structure
  - readiness of organizational culture
  - community survey to identify needs and issues
  - patient survey for needs and issues
  - post-discharge satisfaction surveys
- ◆ Customer assessments
  - both internal and external customer satisfaction
- ◆ Staff assessments
  - physician and staff quality awareness
  - employee comprehension of statistical tools/techniques
  - effectiveness of project teams
- ◆ Project team assessments
  - the successful application of statistical analysis to work processes
- ◆ Long term change
  - long term tracking of changes (such as average length of stay)
  - long term financial efficacy
  - benchmark comparisons



As identified in the prior Indicators section, different measurements are required at different levels of the health care system: population health, regions, the organization, the team and patient evaluation.

Thus it appears that the more information we have from every aspect of service, the better we will be able to measure these aspects. As we learn that improvement can be measured we can be stimulated to react positively to establish better measurements.

## **CHALLENGES & PITFALLS**

### ***In-House Education***

Education needs to support assessment and evaluation. Providing well-planned, process-specific in-house education and support does much to change the way work is done. The vast array of tools and techniques available must be carefully understood so that appropriate choices can be made for the organization's needs. Each organization presents its own unique strengths and weaknesses that dictate what tools and approaches can most effectively be utilized to address the identified needs. Such knowledge cannot be expected from all staff within a facility, therefore a select group of facilitators, educators and statisticians should be available as resources for the organization's changing needs.

These needs arise from the determination of who the customers are, what services they expect and the professional standards that affect the processes that are of concern in the organization. Evaluation not only gives an organization a better understanding of how it works, but helps illuminate results based on process alterations.

### ***Fundamental Understanding***

Evaluation needs to be integrated into work at all levels. Senior management needs to identify ways to make it happen. A major challenge for senior management is to understand that, for evaluation to become an integral part of everyday life, it must involve permanent changes in work behaviour and in the way staff think in the work environment. Such fundamental change underscores the value of effective training and education for all staff. Frontline staff must have a basic understanding of statistical analysis and the ability to interpret the results if they are expected to utilize these tools on a daily basis.



### ***Applying Tools***

Learning to evaluate effectively is most successfully achieved by actually applying the statistical tools. Theoretical discussions are very poor persuaders when it comes to altering behaviour. Management must anticipate the fear and resistance that often accompanies learning concepts that seem as far removed from patient care as statistical analysis.

### ***Motivator and Management Tool***

The ability to track improvements can be used as a powerful motivator for those affected by the changes. As discussed in earlier sections, when the staff who work with the affected systems are part of the solution, they provide an inherent motivator to continue to make their workplace more effective. This type of data also provides an excellent management tool. Decisions can then be made more appropriately, based on facts rather than on mere opinions or experience.

### ***Attitude Change***

Managers may feel threatened by the loss of traditional control and department staff may resist sharing information with other departments. Changing these attitudes to openness and continual learning is no simple task.

#### **MAKING BETTER USE OF MEASUREMENT IN IMPROVEMENT EFFORTS**

- ☒ Limit the number of measurements.
- ☒ Select measurements that are important to clinicians and patients.
- ☒ Make the data collection easy enough and the timeframes short enough so that data collection can be repeated frequently to allow for trending changes over time.
- ☒ Do not try to have the measures serve accountability or research purposes at the same time as improvement.
- ☒ Build in baseline measures before implementing any changes.
- ☒ Provide training, tools and examples to those in clinical settings who are not used to data and this type of measurement.

(Adapted from Solberg, Mosser and McDonald, 1997)



## **ASTHMA EDUCATION PROGRAMME PROJECT TEAM**

*THE CREDIT VALLEY HOSPITAL  
NORTH MISSISSAUGA, ONTARIO*



The Credit Valley Hospital Asthma Education Programme is a unique approach to asthma education for paediatric patients developed through a partnership between The Credit Valley Hospital and Health Alliance, a division of Astra Pharma Inc. The partnership enhances the Asthma Education Programme at The Credit Valley Hospital through its success in improving outcomes for children with asthma.

Through the partnership with Health Alliance, a new and exciting behaviour-based communication system has been incorporated into the Asthma Education Programme. The CareSense™ system, operated through Patient Infosystems, is a personalized, operator-assisted, automated, telephone interview and follow-up contact to supplement classroom instruction.

An evaluation of this unique asthma management programme is currently being conducted through a randomized controlled trial in which short and long term effects will be assessed by comparing patient data before and after implementation of the programme.

The hospital-based Asthma Education Programme has also been extended to the community through implementation of school programmes to assist children with asthma, their families and teachers to better understand asthma and to enable the children to better control and manage their asthma condition.

The multidisciplinary Asthma Education Programme Project Team has demonstrated commitment to the principles of quality improvement, utilizing research review, data gathering and analysis, and outcome evaluation in the process of planning, implementing, continuous monitoring and evaluation of the Asthma Education Programme.

The Credit Valley Hospital partnership with Health Alliance for the Asthma Education Programme is an excellent example of collaboration between public and private sector healthcare providers to develop innovative strategies for disease management. Collaboration with other sectors provides opportunities to develop quality-enhanced, cost-effective solutions to improve the health status of our communities.

See Appendix C for contact information.



### THREE CONTRASTING PURPOSES OF PERFORMANCE MEASUREMENT

*We are increasingly realizing how critical measurement is to the QI we seek, yet how counterproductive it can sometimes be to mix measurement for accountability or research with measurement for improvement. Considered one by one, measurement for each purpose can be good and very important. If done poorly, it can be bad. If the measurements are mixed together in inappropriate ways, they can indeed become harmful or destructive, with the mixed purposes interfering with one another.*

—Solberg et al, 1997

Solberg, Mosser and McDonald (1997) discuss "the three faces" of performance measurement: process improvement, accountability and research:

#### ① *Process Improvement*

There are three key steps in process improvement where measurement is important:

- when identifying which problems or opportunities for improvement need attention
- when the process improvement team is obtaining baseline measurements
- after a new improved process has been implemented

#### ② *Accountability*

Data for accountability, which are data on outcomes or results, do not usually provide information about how the outcomes were achieved or how processes might be changed to improve them. Outcome data become more remote from those that could be used to change processes of care.

The measures selected for accountability are generally measures that matter to external parties; for example, outcome data on complication rates or costs of care.

Since outcome data are difficult to measure, a surrogate—patient satisfaction with the service or treatment—is often used.

#### ③ *Research*

The objectives and methods of measurement for research make it different from measurement for improvement in many respects. Measurement for research is typically too slow, too expensive and too elaborate to be useful for improving processes in hospitals or other facilities.



## ANALYZING PERFORMANCE

Solberg and colleagues (1997) emphasize that it is critical to determine the purposes of measurement: is it for the improvement process, for accountability, or for research? While the measurement for each purpose is important, it is counterproductive to mix measurements.

Analyzing team and organizational performance is essential and challenging given the difficulty in getting useful and timely information, linking this information to key issues and determining the changes needed to respond to this data. The following section discusses approaches for process improvement measures and accountability.

Process improvement measurements include:

- ◆ *Patient satisfaction surveys.* These are an important component of customer assessment.
- ◆ *Clinical value compass.* This approach emphasizes the involvement of clinicians in the process. It is valuable in both acute care and community settings and provides information for an individual team as well as the organization.
- ◆ *Scorecards.* Examples include an approach for Canadian hospitals and a specific nursing report.

Accountability measurements include:

- ◆ *Evaluation reports.* Data for accountability do not usually provide information about how the outcomes were achieved. "Accountability data are intended to be non-confidential. They are intended to be used for judgement" (Solberg et al, 1997).

Research to support improvement includes:

- ◆ The Cochrane Collaboration
- ◆ The Institute for Clinical Evaluative Services (ICES)



## PROCESS IMPROVEMENT MEASUREMENTS

### Patient Satisfaction Surveys



The value of patient satisfaction surveys was discussed in Part Three. There are a number of important considerations in the use of patient surveys. The following highlights concerns, purposes and methods.

- ◆ A psychometrically sound questionnaire: A questionnaire's degree of accuracy needs to be assessed by measuring its reliability and validity.
- ◆ Avoidance of bias in data collection: Interviewer bias, which is often associated with personal interviews and telephone surveys, tends to inflate patient satisfaction scores and, as a result, obscures opportunities for improvement. Non-response bias, which is more typical of mailed surveys, occurs when there is a systematic difference between those who respond and those who do not respond (Carey, 1999).
- ◆ Purpose of study: The purpose of the survey determines the sampling method, the survey frequency and the appropriate report format. An *enumerative study* is conducted on a static population for a given period and/or location and is designed merely to describe outcomes. An *analytic study* examines a process over time and seeks to determine why the outcomes were observed and/or whether planned improvements had any impact (Carey, 1999).
- ◆ The usefulness of patient satisfaction reports is greatly increased if they are done regularly (monthly or quarterly), but this requires adopting new methods to minimize the cost of surveying (Baker and Pink, 1995).
- ◆ Newer methods of eliciting both reports and ratings can provide reliable, valid, interpretable and actionable data about selected aspects of health care. The use of these methods and continued use of new qualitative methods such as cognitive interviewing should allow an increase in the prominence of consumer-based information in quality assessment and improvement efforts (Cleary, 1998).

*Social desirability bias is a well-known problem in the survey literature that is particularly serious in healthcare settings. The sick role adopted by patients requires that they seek out and comply with expert care from physicians and other healthcare service providers.*

— Hirdes et al, 1998



### **DIMENSIONS OF PATIENT EVALUATION**

- ◆ **Efficacy** of the procedure or treatment in relation to the patient's condition. The degree to which the care/intervention for the patient has been shown to accomplish the desired/projected outcome(s).
- ◆ **Appropriateness** of a specific test, procedure or service to meet the patient's needs. The degree to which the care/intervention provided is relevant to the patient's clinical needs, given the current state of knowledge.
- ◆ **Availability** of a needed test, procedure, treatment or service to the patient who needs it. The degree to which appropriate care/intervention is performed when required by the patient.
- ◆ **Timeliness** with which a needed test, procedure, treatment or service is provided to the patient. The degree to which the care/intervention is provided to the patient at the most beneficial or necessary time.
- ◆ **Effectiveness** with which tests, procedures, treatments and services are provided. The degree to which the care/intervention is provided in the correct manner, given the current state of knowledge, in order to achieve the desired/projected outcome for the patient.
- ◆ **Continuity** of the services provided to the patient with respect to other services, practitioners and providers, over time. The degree to which the care/intervention for the patient is coordinated among practitioners and organizations, over time.
- ◆ **Safety** to the patient (and others) to whom the services are provided. The degree to which the risk of an intervention and risk in the care environment are reduced for the patient and others, including health care practitioners.
- ◆ **Efficiency** with which services are provided. The relationship between the outcomes (results of care/intervention) and the resources used to deliver the care/intervention.
- ◆ **Respect and caring** with which services are provided. The degree to which the patient or a designee is involved in his/her own care decisions and to which those providing services do so with sensitivity and respect for the patient's needs, expectations and individual differences.

*(Joint Commission Journal on Quality Improvement, 1995)*



### **Clinical Value Compass**

*... the process of measurement should be intertwined with the process of care delivery so that front-line providers are involved in both managing the patient and measuring the process and related outcomes and costs.*

— Nelson, Mohr et al, 1996



The Clinical Value Compass is named to reflect its similarity in layout to a directional compass, with four cardinal points:

- clinical outcomes
- functional status, risk status and well-being
- satisfaction with health care and perceived benefit
- costs

In order to manage and improve the value of health care services, providers need to measure the value of care for similar patient populations, analyze the internal delivery processes, run tests of changed delivery processes and determine if these changes lead to better outcomes.

Nelson and his colleagues (1996) suggest the following types of measures that might be included in the planning process under each one of the compass headings:

- Clinical: mortality and morbidity (such as signs, symptoms, treatment complications, diagnostic tests results, laboratory determinations of physiologic values)
- Functional: physical function, mental health, social role function and other measures of health status (such as pain, vitality, perceived well-being and health risk status)
- Satisfaction: patient/family satisfaction with the health care delivery process, patients' perceived health benefit from care received
- Costs: direct medical costs (ambulatory care, inpatient services, medications) and indirect social costs (days lost from work/normal routine, replacement worker costs, caregiver costs)

The friendliness between measurement and aims comes as a surprise to many health care groups. They are so used to experiencing measurement as judgement that they have forgotten the role of measurement in improvement (Berwick, 1996).





### FRAMEWORK FOR COMMUNITY HEALTH THE CLINICAL IMPROVEMENT MODEL

*The process-outcome methodology of CQI can translate large community aims into manageable projects. The sequential application of the clinical improvement model and the Community Health Value Compass for measuring outcomes – in state of health, quality of life, satisfaction, and costs – provides a link between data and action, thereby producing accountability for the community health initiative.*

#### **Community Health Value Compass**

The value compass represents a balanced approach to community health measurement, incorporating quality of life, consumer satisfaction and costs, in addition to health indicators. A generic value compass for community health provides a conceptual framework for community health assessment. The value compass, which is used to measure outcomes, can assist community collaboratives in evaluating trade-offs that can alter the priority of actions to be taken, just as CQI methodology, which is used to induce change, can be used to assist them in overcoming barriers to organizing and implementing their health improvement initiatives.

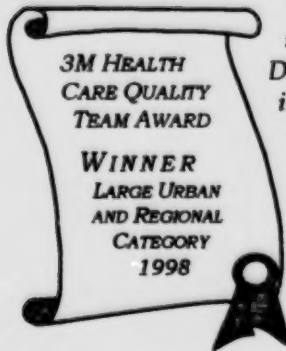
—Speroff, Miles and Mathews, 1998



## ORTHOPAEDIC FUTURES, MAKING THE RIGHT INVESTMENTS!

### A REDESIGN OF CARE AND SERVICE TO CREATE A CONTINUUM OF QUALITY CARE FOR ORTHOPAEDIC PATIENTS

Scarborough General Hospital  
Scarborough, Ontario



The project results from the redesigning of care and services in the Orthopaedic and Rehabilitation Division. The first objective was to invest in improvements to produce the best returns in clinical, quality, financial and operational performance indicators. The second objective was to have sustainable improvements that were not lost over time, but were challenged by further improvements. This initiative was a major organizational change that began as an idea in 1996 and continues to contribute to innovation in the delivery of health services.

The Orthopaedic and Rehabilitation Division had the common goal of improving the quality of care and services provided by creating a continuum of care. To optimize system performance the parts must interact effectively and efficiently in service of the goals of the system as a whole.

Collaboration, innovation and data based decisions are the key concepts that resulted in achievement of benchmark status in many performance indicators.

The methodology for this team achieving success is entrenched in the quality principles of leadership, teams, a learning environment, empowerment, accountability, continuous quality, process improvement, holding the gains and moving their targets.

As a result of the work demonstrated in this project, Scarborough General Hospital has become a benchmark hospital; however, benchmarking is only one step. Our success in quality improvement will be measured by where we go from here.

See Appendix C for contact information.



### Balanced Scorecards

*Health care organizations today face increased pressures from government, taxpayers and patients for greater accountability. Managers and clients require better measures of organizational performance that can be used to orient their efforts to improve performance.*

— Baker and Pink, 1995

Effective measurement must be an integral part of the management process. The balanced scorecard provides executives with a comprehensive framework that translates an organization's strategic objectives into a coherent set of performance measures (Kaplan and Norton, 1993).

The balanced scorecard framework links performance measures (Kaplan and Norton, 1993). It provides answers to four basic questions (Figure 1):

1. How do customers see us? (customer perspective)
2. What must we excel at? (internal perspective)
3. Can we continue to improve and create value? (innovation and learning perspective)
4. How do we look to funders? (financial perspective)

**FIGURE 1: A BALANCED SCORECARD FRAMEWORK**

	How do we look to funders? <b>Financial Perspective</b> <i>Goals &amp; Measures</i>	
How do customers see us? <b>Customer Perspective</b> <i>Goals &amp; Measures</i>		What must we excel at? <b>Internal Business Perspective</b> <i>Goals &amp; Measures</i>
	Can we continue to improve? <b>Innovation and Learning Perspective</b> <i>Goals &amp; Measures</i>	



The scorecard gives senior managers information from four perspectives, while at the same time minimizing information overload by limiting the number of measures used.

*The balanced scorecard approach requires deliberate selection of a limited number of indicators in each perspective.*

— Baker and Pink, 1995

Each of the four perspectives requires that managers select a set of measures to monitor.

- ◆ Data for these measures must be valid, reliable and available in a reasonable time period.
- ◆ The data must reflect crucial activities (the core process) and important results (outcome measures).
- ◆ Data must be collected on an ongoing and periodic basis, analyzed over time and, where possible, compared with results from other organizations, particularly leaders in the field.
- ◆ The specific measures selected must be relevant to organizational goals.
- ◆ The data should be based on sound research to ensure that they are valid and reliable (Baker and Pink, 1995).

The crucial tests on the success of the scorecard approach are whether the scorecard information becomes a cornerstone for decision making and whether managers can link their broader organizational goals to changes in performance measures (Baker and Pink, 1995).

*The balanced scorecard is like the dials in an airplane cockpit: it gives managers complex information at a glance.*

— Kaplan and Norton, 1992

A balanced scorecard should focus organizational activities on goals and assist in deploying these goals through the organization (see following table).



Baker and Pink outline the following significant issues.

#### **PATIENT SATISFACTION**

Patients' concerns tend to fall into five categories: time, process quality, service, outcome and cost. Did the patient receive service promptly? Was the service provided free of error? Was the service provided in a comfortable and respectful manner? Did the service alleviate the patient's problem? Was the service provided in such a way as to minimize cost and inconvenience to the patient and family?

#### **LINKAGE**

To achieve goals on quality, productivity and cost, managers must select measures that are influenced by employees' actions. Since much of the action takes place at the department and nursing unit level, managers need to deploy overall quality, productivity and cost measures at local levels. That way, the measures link top management's judgement about key internal processes and competencies to the actions taken by individuals that affect overall hospital objectives. This linkage ensures that employees' activities will contribute to the hospital's overall mission.

#### **LEARNING**

Innovation and learning are the most challenging areas in which to develop measures; these measures are important since they assess organizational capacity for improvement and change. Hospitals must make continual improvement to their existing services and have the ability to implement new services with expanded capabilities if they are to prosper in the competitive health care environment.



## *The Spider Diagram Nursing Quality Report Card*

*What makes this particular report card unique is the use of a spider diagram to link – in a single management report – many of the diverse elements of a division's functions.*

– Lancaster and King, 1999



The following example demonstrates how graphical techniques can be used to display and communicate the results of the balanced scorecard measures. The authors emphasize the complexity of managing nursing practice, and that effective decision making requires managers to be able to simultaneously view performance in several areas.

In keeping with Donabedian's conceptual framework, the "Spider Diagram Nursing Quality Report Card" contains a set of measures that provide a quick but interrelated view of selected structure, process and outcome measures of nursing care quality.

- Structural indicators are represented by a nursing workload measure that incorporates both patient acuity and census data elements.
- Process and outcome indicators are represented by monitors of key internal clinical processes and also include a view from the patient-as-customer perspective.

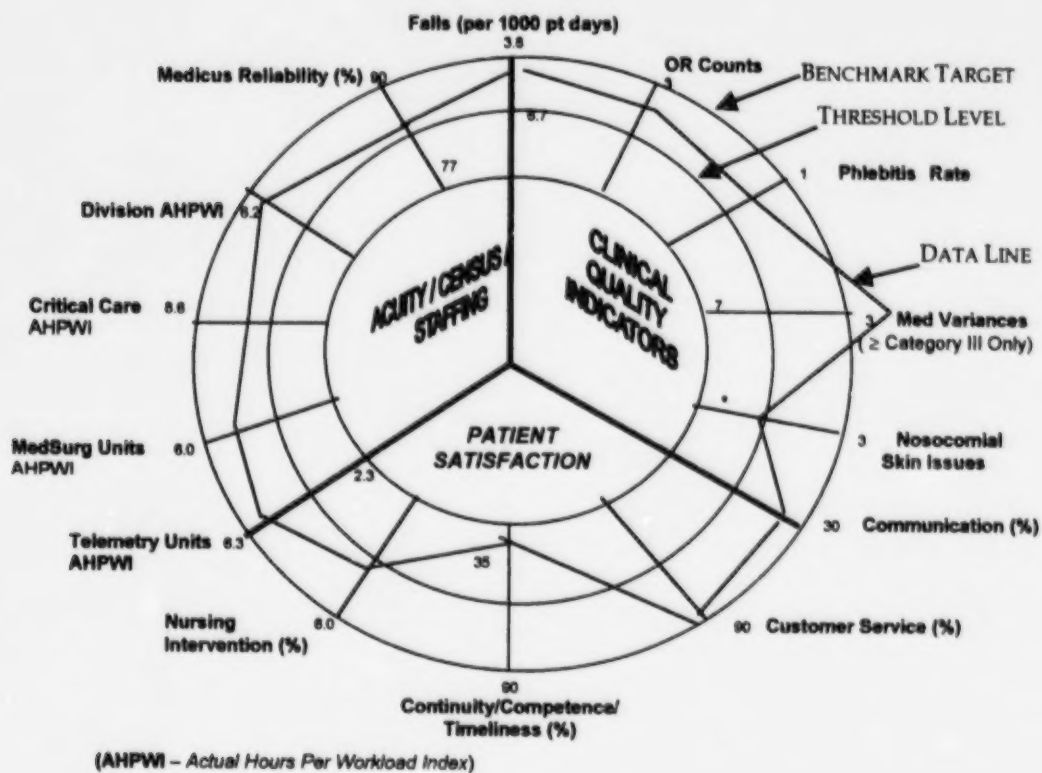
The data elements contained within this particular quality report are fairly common and were patterned after the American Nurses Association Safety and Quality Initiative (Lancaster and King, 1999).

Presentation of quality data, by use of a graphic spider diagram, to link diverse elements:

- minimizes information overload by its succinct presentation of multiple quality indicators
- maximizes nurse-sensitive structures, processes and outcomes by allowing managers to focus on those interrelated data elements that are seen as critical to the provision of quality nursing care
- allows managers to see whether improvement in one area may have been achieved at the expense of another.



Example of a Spider Diagram (adapted from Lancaster and King, 1999)





## EVALUATION REPORTS: ACCOUNTABILITY MEASUREMENTS

*Data for accountability, which are data on outcomes or results, do not usually provide information about how the outcomes were achieved or how processes might be changed to improve them.*

- Solberg, Mosser and McDonald, 1997

Quality has long been measured for the internal purposes of health care organizations to guide quality assurance and improvement. The public distribution of information on the quality of health care dates back at least to the 1860s, when Florence Nightingale publicized the mortality rates of patients in London hospitals. In the past decade, however, there have been concerted efforts to develop and disseminate information on indicators of quality (Epstein, 1995).

The development of evaluative reports is a complex undertaking. Three significant trends have impacted their recent evolution:

- an increasing demand for accountability from the public, government and other stakeholders
- the development of information which enables the capture of detailed information
- the development of valid reliable measures of complex phenomena such as quality of care and patient satisfaction

### ***An Example: The Hospital Report***

As a result of these trends there has been development of evaluative reports in public and private sectors. In November 1998 the Ontario Hospital Association released *Hospital Report '98*, the first Ontario hospital system report of its kind. Produced by researchers at the University of Toronto, *Hospital Report '98* provides a balanced scorecard of performance indicators in four dimensions: clinical utilization and outcomes, financial performance and condition, patient satisfaction, and system integration and change. The report also demonstrates the improvements in research and analysis that are making such measurements accessible to managers and clinicians across the system. *Hospital Report '99*, published in December 1999, takes this evolution one step further by providing reports on individual hospital performance as well as an update on the system report. These reports illustrate the role of performance measurement in identifying and guiding performance improvement efforts in the healthcare system.



### *The Hospital Report '99: A Balanced Scorecard for Ontario's Acute Care Hospitals*

*Hospital Report '99* presents performance measures in four domains:

- clinical utilization and outcomes
- patient satisfaction
- financial performance and condition
- system integration and change

#### *Background*

*Hospital Report '99* provides an assessment of the performance of Ontario hospitals on 38 measures of performance. These measures were selected using three criteria: relevance, feasibility, and scientific soundness. Researchers at the University of Toronto reviewed hospital performance measures developed in a wide range of reports in both the US and Canada. Consultation with key stakeholders, including clinicians, hospital managers, community providers and other key organizations such as the Canadian Council on Health Services Accreditation and the Canadian Institute of Health Information were used to identify measures relevant and useful for assessing performance. These measures are presented in a system-wide overview to provide a context for assessing individual hospital performance. Individual hospitals' results are provided in a balanced scorecard format indicating for the 38 measures whether each hospital has above average performance, average performance or below average performance. More detailed information will be provided to hospitals in a technical report.

#### *Purpose*

The Hospital Report does not replace internal performance measurement systems. By creating a set of relevant, feasible and scientifically sound measures the Hospital Report '99 aims to create a platform for more detailed local initiatives designed to measure hospital performance. These measures provide a baseline for aiming and measuring efforts for further improvement in hospital care in Ontario.

Baker GR et al. *The Hospital Report '99.*  
*A balanced scorecard for Ontario's acute care hospitals.*  
Toronto: Ontario Hospital Association, 1999.



## CHALLENGES OF REPORT CARDS

### AN AMERICAN PERSPECTIVE

As the concept of performance reporting on quality has evolved in the United States, the term "report card" has come to mean standardized, publicly released reports on the quality of care. The reports cover health plans, institutions such as hospitals, and even individual physicians (Epstein, 1995).

#### *Concerns*

"Accountability" is the rallying cry of payers, and they cannot force accountability without measurement and public reporting of health care's performance. This said, however, Berwick views the focus on report cards as simplistic and a diversion of resources, leading to "too much energy on looking better and not enough on becoming better." He looks outside the health care system to the experiences of globally competitive organizations that have become "customer driven" (Berwick, 1997).

If report cards are really to help restore a needed focus on quality and access in the health care system, they should be designed to provide hospitals with information useful for quality improvement—that is, actionable information on structure and processes of care (Thomas, 1998).

*It is worth noting that the quality of care measure most commonly used in hospital report cards—risk-adjusted mortality rate—is not useful for quality improvement. After years of research efforts, mortality rate remains a highly inaccurate indicator of quality performance, both because of systematic bias in risk adjustments, as Lisa Ozone and her colleagues have thoroughly documented, and because of the magnitude of random measurement error associated with any binomial outcome, as Hofer and Hayward and Zalkind have recently shown.*

—Thomas, 1998

Scanlon et al (1998) suggest that health plan report cards may be sending mixed signals to consumers. Focus group studies have found that, despite the widespread indication that plan performance measures would be useful, relatively few of those who had seen such information report using it in making their plan choice. Future efforts to evaluate health plans should clearly identify assumptions, methods, normative judgements and limitations.

The above perspectives apply to the market-driven context of US health care. Canadian performance reports are taking a different approach. Are problems seen in their use likely to emerge in Canada? It is too early to say.



## RESEARCH TO SUPPORT IMPROVEMENT

Research provides an important source of measurement. In a variety of ways, organizations are making use of the guidelines provided through research groups such as the Cochrane Collaboration and the Institute for Clinical Evaluative Sciences in Ontario (ICES). These resources provide valuable information for the clinician.

ICES is a non-profit, independent organization of researchers dedicated to improving the efficiency and effectiveness of health care for all Ontarians, established in 1992 under the sponsorship of the Ontario Medical Association and the Ontario Ministry of Health. Its purpose is to *gather and analyze health care data that could serve as a catalyst for change.*

ICES researchers have conducted numerous studies focusing on areas relevant to clinical practice and public policy. Each study serves to help evaluate and improve Ontario's health care services.

The information is offered in a variety of forms such as newsletters, decision aids, guidelines, working papers and *The ICES Practice Atlas Series*, which documents province-wide patterns of medical care.

Further information on ICES may be obtained online at  
[HTTP://WWW.ICES.ON.CA](http://www.ices.on.ca)

## THE COCHRANE COLLABORATION

### Guidelines and evidence-based reports:

*The international Cochrane Collaboration is providing the evidence for other groups to use in developing their own guidelines, performance measures, and other tools.*

The Cochrane Collaboration is an international non-profit organization that prepares, maintains and disseminates systematic up-to-date reviews of health care interventions and makes these publicly available in electronic form through subscription to the Cochrane Library and on the Internet. Some 42 collaborative review groups (CRGs), organized by particular clinical areas and coordinated by editorial teams, edit and assemble completed reviews into modules for inclusion in the Cochrane Database of Systematic Reviews. These structured reviews include or exclude evidence on the basis of explicit quality criteria to minimize bias. Data are often combined statistically through meta-analysis to increase the power of the findings of numerous studies, each too small to produce reliable results individually. After a review the teams make a protocol, which is also reviewed.

—Kaegi, 1999



# THE CHALLENGES OF MEASURING OUTCOMES

As discussed, there are a number of challenges.

## *A Complex Concept*

Patient outcomes are an immensely complex concept. They span the range of results that proceed from (or are presumed to be associated with) the provision of health care services. They are measured both directly and indirectly, over differing periods of time, and with varying degrees of objectivity, reliability and validity. The desirability of one outcome rather than another in any given clinical situation may differ markedly according to the values and preferences of patients (Harrigan, 1992).

Patient outcomes are an integral part of the trilogy used to define and assess quality of care: structure, process and outcome (Donabedian, 1982). Broadly defined, outcome measures are any measurement system used to uncover or identify the health outcome of treatment for the patient.

## OUTCOMES MEASUREMENT

*A man of foresight and conviction, Ernest A. Codman, M.D. (1869-1940), was the acknowledged founder of what today is known as outcomes measurement and management. His lifelong pursuit was to establish an "end results system" to track the outcomes of patient treatments. These outcomes, he believed, could be used to surface opportunities for improving the care of future patients.*

*Codman established the link between quality assessment and clinical science and made individual practitioners, hospitals and professional associations responsible for both.*

*The calibration and certification of the end results of care was, in Codman's view, only the hospital's indispensable first step toward public accountability.*

*— Donabedian, 1998*



### **Technical Considerations**

While the goals of care and qualities to be monitored can be decided by any concerned group of people, "the actual monitoring of outcomes is a highly technical endeavour that combines insights drawn from clinical research, epidemiology, and statistics" (Pine, 1991).

### **ASSESSING IMPACT**

*Large reductions in the use of acute hospital services have occurred in Alberta during the period of major health care restructuring. Further research is needed to examine shifts in services to other sectors and to assess the impact of these reductions on patient outcomes.*

—Saunders et al, 1999

### **State of the Art**

Donaldson and Nolan (1997), in reporting on an invitational conference sponsored by the Institute of Medicine and its National Roundtable on Health Care Quality, quote Mark Chassin:

*Although the science of measurement is important, the art of shaping these measures to fit into functioning improvement systems is also essential.*

Chassin emphasized that there is sufficient evidence at hand to allow us to conclude beyond a reasonable doubt that quality can be measured. When used appropriately, exemplary measures of quality can be vital factors in improving outcomes for patients; however, there are challenges, such as deciding what measures of quality should be used. He emphasized that process measurements are valid quality measurements, but only if linked to outcomes that are important. Similarly, outcome measurements are valid quality measurements, but only if they are related to processes of care that can be changed to affect outcomes. By recognizing such considerations, measurements will be far more useful, not only to consumers and purchasers, but also to clinicians charged with improvement (Donaldson and Nolan, 1997).



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*Many organizations have started continuous quality improvement, and have 'nibbled at the edges of CQI' through the initiation or completion of a number of process improvements. Some are now facing the question, 'Where do we go from here?' Clearly it is important that organizations address the development of strategic quality goals, and the identification of macroprocesses or systems for the purpose of creating a framework within which microprocess improvement has relevancy to overall strategic directions of the institution. Organizations that fail to do this are destined to continue with microprocess improvements and may never 'drain the swamp.'*

Donald Carlow  
President & CEO, British Columbia Cancer Agency  
Vancouver, British Columbia

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# APPENDICES

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**DEMING'S 14 POINTS**

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# APPENDIX A

## DEMING'S 14 POINTS







## **14 POINTS OF W. EDWARDS DEMING**

- 1.** Create constancy of purpose for the improvement of product and service.
- 2.** Adopt the new philosophy.
- 3.** Cease dependence on mass inspection.
- 4.** End the practice of awarding business on price tags alone.
- 5.** Improve constantly and forever the system of production and service.
- 6.** Institute training and retraining.
- 7.** Institute leadership.
- 8.** Drive out fear.
- 9.** Break down barriers between staff areas.
- 10.** Eliminate slogans, exhortations, and targets for the workforce.
- 11.** Eliminate numerical quotas.
- 12.** Remove barriers to pride in workmanship.
- 13.** Institute a vigorous program of education and retraining.
- 14.** Take action to accomplish the transformation.







# APPENDIX B

## INTERNET RESOURCES







## OVERVIEW

This section provides a number of Internet sites that have particular relevance to quality in health care issues.

The inventory includes:

- ~ Subject-oriented guides and gateways
- ~ Electronic journals
- ~ Specific databases
- ~ Clinical practice guidelines
- ~ Associations and institutions
- ~ Government information
- ~ Conference information
- ~ Listservs (electronic mailing lists)
- ~ Other sites of interest













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## SUBJECT-ORIENTED GUIDES AND GATEWAYS

-  **Hardin Meta Directory of Internet Health Sources**  
<http://www.arcade.uiowa.edu/hardin-www/md.html>
-  **Martindale's Health Science Guide**  
<http://www-sci.lib.uci.edu/HSGuide.html>
-  **Medical Matrix: Guide to Internet Clinical Medicine Resources**  
<http://www.medmatrix.org>
-  **OMNI: Organizing Medical Networked Information**  
<http://omni.ac.uk/>
-  **Yahoo! Health**  
<http://www.yahoo.com/health>
-  **Yahoo! Medicine**  
<http://www.yahoo.com/health/medicine>



## ELECTRONIC JOURNALS

-  **Academic Medicine**  
<http://www.aamc.org/findinfo/aamcpubs/acadmed/start.htm>
-  **American Journal of Nursing Online**  
<http://www.ajn.org/>  
  
Other nursing journals, including AJN  
<http://www.NursingCenter.com>
-  **American Journal of Public Health**  
<http://www.apha.org/news/publications/journal/AJPH2.html>
-  **Archives of AMA and JAMA (The American Medical Association publications)**  
[http://www.ama-assn.org/archive\\_home.htm](http://www.ama-assn.org/archive_home.htm)
-  **BMJ - British Medical Journal**  
<http://www.bmj.com/bmj/index.html>
-  **Canadian Medical Association Journal Online**  
<http://www.cma.ca/publications/index.htm>
-  **Cost and Quality Quarterly**  
<http://www.cost-quality.com/>
-  **Evidence-Based Medicine**  
<http://www.acponline.org/journals/ebm/ebmmenu.htm>
-  **Health Services Research**  
<http://www.xnet.com/~hret/hsr.htm>
-  **International Journal for Quality in Health Care**  
<http://www.isqua.org.au/Journal/journal.html>
-  **The Lancet**  
<http://www.thelancet.com>
-  **New England Journal of Medicine Online**  
<http://www.nejm.org/>
-  **MedWeb**  
<http://www.medweb.emory.edu/MedWeb/>



## SPECIFIC DATABASES



**CancerNet**

<http://cancernet.nci.nih.gov/>



**CARL UnCover**

<http://uncweb.carl.org/>



**ERIC Database**

<http://ericir.syr.edu/Eric/>



**MEDLINE**

<http://www.medmatrix.org>



**Physicians Data Query (PDQ) Cancer Database**

<gopher://gopher.nih.gov:70/11/clin/cancernet/pdqinfo>



## CLINICAL PRACTICE GUIDELINES

- ☐ **Alberta Medical Association - Clinical Practice Guidelines**  
<http://www.amda.ab.ca/cpg/search.html>
- ☐ **American Society of Anesthesiologists**  
<http://www.asahq.org/>
- ☐ **Canadian Medical Association - Clinical Practice Guidelines Infobase**  
<http://www.cma.ca/cpgs/index.html>
- ☐ **Centers for Disease Control and Prevention (CDC) - CDC Prevention Guidelines**  
<http://wonder.cdc.gov/wonder/prevguid/prevguid.htm>
- ☐ **Cochrane Collaboration**  
<http://hiru.mcmaster.ca/cochrane/default.htm>
- ☐ **HEALNet (Health Evidence Application and Linkage Network)**  
<http://hiru.hirunet.mcmaster.ca/nce/>
- ☐ **HIRU (Health Information Research Unit)**  
<http://hiru.mcmaster.ca/>
- ☐ **HSTAT (Health Services/Technology Assessment)**  
<http://text.nlm.nih.gov/>



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## ASSOCIATIONS AND INSTITUTIONS

- ☐ **American College of Healthcare Executives (ACHE)**  
<http://www.ache.org/>
- ☐ **American Hospital Association**  
<http://www.aha.org/>
- ☐ **American Medical Association (AMA)**  
<http://www.ama-assn.org/>
- ☐ **American Society for Healthcare Risk Management**  
<http://www.ashrm.org/>
- ☐ **Canadian College of Health Services Executives (CCHSE)**  
<http://www.cchse.org/>
- ☐ **Canadian Council On Health Services Accreditation**  
<http://www.cchsa.ca/>
- ☐ **Canadian Institute for Health Information (CIHI)**  
<http://www.cihi.ca>
- ☐ **Canadian Medical Association Online (CMA)**  
<http://www.cma.ca/>
- ☐ **Canadian Society for International Health (CSIH)**  
<http://www.csih.org/>
- ☐ **European Healthcare Management Association (EHMA)**  
<http://www.ehma.org/index/html>
- ☐ **International Society for Quality in Health Care (ISQua)**  
<http://www.isqua.org.au/>
- ☐ **National Committee for Quality Assurance (NCQA)**  
<http://www.ncqa.org>
- ☐ **Ontario Hospital Association**  
<http://www.oha.com>



## GOVERNMENT INFORMATION

### CANADIAN FEDERAL HEALTH MINISTRY

- Health Canada Online  
<http://www.hc-sc.gc.ca/>

### Health Canada - Adult Health Division Websites

**adulthealth.com**

- ☞ Main Page  
<http://www.adulthealth.com>
- ☞ Breast Cancer  
<http://www.adulthealth.com/breastcancer>
- ☞ Cervical Cancer  
<http://www.adulthealth.com/cervicalcancer>
- ☞ CINDI (Countrywide Integrated Noncommunicable Diseases Intervention Program)  
<http://www.adulthealth.com/CINDI>
- ☞ Diabetes  
<http://www.adulthealth.com/diabetes>
- ☞ Heart Health  
<http://www.adulthealth.com/hearthealth>
- ☞ Healthy Heart Kit  
<http://www.healthyheartkit.com> or  
<http://www.adulthealth.com/healthyheartkit>
- ☞ Hypertension  
<http://www.adulthealth.com/hypertension>
- ☞ Preventative Care  
<http://www.adulthealth.com/CGCPHC>
- ☞ Preventative Practices  
<http://www.adulthealth.com/epphp>
- ☞ Workplace Health  
<http://www.adulthealth.com/workplace>



**PROVINCIAL HEALTH MINISTRIES**

- British Columbia      <http://www.hlth.gov.bc.ca>
- Alberta      <http://www.health.gov.ab.ca>
- Saskatchewan      <http://www.gov.sk.ca/govt/health>
- Manitoba      <http://www.gov.mb.ca/health>
- Ontario      <http://www.gov.on.ca/health>
- Quebec      <http://www.msss.gouv.qc.ca>
- New Brunswick      <http://www.gov.nb.ca/hcs>
- Nova Scotia      [http://www.gov.ns.ca/govt\\_index.asp](http://www.gov.ns.ca/govt_index.asp)
- Prince Edward Island      <http://www.gov.pe.ca/hss>
- Newfoundland      <http://www.gov.nf.ca/health>
- Northwest Territories      <http://www.hlthss.gov.nt.ca>
- Yukon Territory      <http://www.hss.gov.yk.ca>
- Nunavut      <http://www.nunavut.com/health/>



## INTERNATIONAL SITES

- **Centers for Disease Control and Prevention (CDC)**  
<http://www.cdc.gov/>
- **National Cancer Institute (NCI)**  
<http://www.nci.nih.gov/>
- **National Guideline Clearinghouse (NGC)**  
<http://www.guideline.gov/>
- **National Institutes of Health (NIH)**  
<http://www.nih.gov/>
- **National Library of Medicine (NLM)**  
<http://www.nlm.nih.gov/>
- **US Department of Health and Human Services (HHS)**  
<http://www.os.dhhs.gov/>
- **World Health Organization (WHO)**  
<http://www.who.ch/>



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## CONFERENCE INFORMATION

- \* **Canadian Medical Association CME Corner**  
<http://www.cma.ca/prodev/cme.htm>
- \* **Doctor's Guide: Medical Meetings and Conferences**  
<http://www.pslgroup.com/medconf.htm>
- \* **National Committee for Quality Assurance Conferences (NCQA)**  
<http://www.ncqa.org/pages/education/edcal.htm>
- \* **Notices of Upcoming Medical Meetings - New England Journal of Medicine**  
<http://www.nejm.org/general/text/Notices.htm>
- \* **Physician's Guide to the Internet - Meetings and Conferences**  
<http://www.webcom.com/pgi/meetings.html>

## LISTSERVS

- 📖 **HEALTHMGMT**  
E-mail: [listserv@ursus.jun.alaska.edu](mailto:listserv@ursus.jun.alaska.edu)
- 📖 **QP-HEALTH**  
E-mail: [majordomo@quality.org](mailto:majordomo@quality.org)



## OTHER SITES OF INTEREST

- ☐ **Agency for Health Care Policy and Research**  
<http://www.ahcpr.gov/>
- ☐ **Canadian Task force on Preventive Health Care (CTFPHC)**  
<http://www.ctfphc.org/>
- ☐ **Center for Advanced Medical Informatics**  
<http://camis.stanford.edu/>
- ☐ **The Change Foundation**  
<http://www.changefoundation.com/oha/>
- ☐ **Columbia-Presbyterian Medical Centre, New York**  
<http://cpmcnet.columbia.edu/health.sci/>
- ☐ **Community Health Management Information Services (CHMIS)**  
<http://www.chmis.org/>
- ☐ **Electric Differential Multimedia Lab, University of Iowa**  
<http://www.vh.org/>
- ☐ **Group Health Cooperative of Puget Sound**  
<http://www.ghc.org>
- ☐ **HCFA (Health Care Financing Administration)**  
<http://www.hcfa.gov>
- ☐ **HCIA**  
<http://www.hcia.com>
- ☐ **Healthcare Quality Assessment Page**  
<http://www.qserve.com/hcass/>
- ☐ **HospitalWeb**  
<http://neuro-www.mgh.harvard.edu/hospitalweb.shtml>
- ☐ **Institute for Clinical Evaluative Services (ICES)**  
<http://www.ices.on.ca>
- ☐ **Institute for Healthcare Improvement**  
<http://www.ihl.org/>



- ☐ **Medical Outcomes Trust**  
<http://www.outcomes-trust.org/>
- ☐ **Oncolink**  
<http://oncolink.upenn.edu>
- ☐ **Pharminfo**  
[http://pharminfo.com/pin\\_hp.html](http://pharminfo.com/pin_hp.html)
- ☐ **Virtual Hospital**  
<http://www.vh.org>
- ☐ **Visible Human Project**  
[http://www.nlm.nih.gov/research/visible/visible\\_human.html](http://www.nlm.nih.gov/research/visible/visible_human.html)







# APPENDIX C

## CONTACT INFORMATION







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**Teamwork Key to Quality Care: Filmless Digital Imaging System  
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# APPENDIX D

## **A REGIONAL PLAN:**

A Management Plan To Integrate  
and Coordinate Quality for the  
North Shore Health Region







## RECOMMENDATIONS AND IMPLEMENTATION STRATEGIES

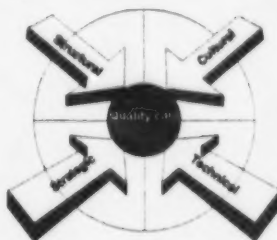
There are a number of steps that will be important for the Region to take if it is to implement an integrated and coordinated approach to monitoring and improving the quality of its health care and service. These are presented in this section in the form of recommendations. Each of these is followed by a discussion of specific strategies / actions.

A key recommendation relates to the leadership for implementation of this Plan. We [HMRG] are suggesting that an implementation committee or team be established that would have the responsibility and be accountable for implementation. This is discussed more fully in the section on "Structures and Processes for Quality."

Finally, we divide our recommendations into those which we suggest be completed within six months and those within one year. In the appendices to this plan, we provide examples and draft material that could be used by the implementation committee or team as they move to implement the recommendations.

### CREATE THE CULTURE FOR QUALITY

*Creating a culture that demonstrates the NSHR's commitment to quality and to enabling teams to fulfil their role.*



**Within six months,**

- 1. Finalize the framework, language and approach for quality monitoring and improvement.**

This is critical to promoting a common culture for quality in the Region given the very different conceptual frameworks in use now.



In Section II we present a framework and key concepts for talking about quality which include proposed linkages with existing activity on the North Shore. These concepts and language for quality monitoring and improvement are used by CCHSA and many of the regions across Canada.

In this framework, we:

- define quality by its eight dimensions (e.g. accessible, acceptable, effective, etc.)
- discuss the concepts of "managing" quality
- discuss how quality improvement strategies link with quality assurance, utilization management, evaluation
- describe what health system quality performance indicators are and how they can help teams in the Region evaluate its services
- discuss the relationship between health system indicators and the population health status indicators
- discuss how the indicators developed through the NSHR program logic model of evaluation could fit with an integrated system for quality monitoring and improvement

These concepts can be adopted 'as is' or revised by a working group.

**2. Design and implement a communication strategy to help all people who work with, and for the Region to understand the Region's plan for managing quality.**

Information to be communicated could include:

- the goals for quality improvement and monitoring
- the principles upon which the Region's quality system is based
- the key concepts and linkages
- the role of individuals and groups in managing and improving quality
- the plan and timeframe for implementing changes
- implementation progress and achievements

Communication would be to internal and external groups. The specific vehicles could be:

- NSHR newsletter
- staff meetings
- payroll notices
- new employee orientation
- local newspaper coverage



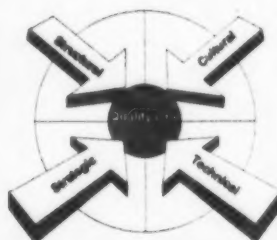
### 3. Integrate quality monitoring and reporting into management processes.

This could include:

- developing a Regional approach to staff performance review which reflects expectations for all staff to participate in quality improvement activities
- defining expectations for physicians who are paid sessional fees to participate in QI activities
- reviewing quality goals, principles, key concepts and expectations in the orientation of new staff, new teams, etc.
- orientating new and established teams to their role in quality monitoring, improvement and reporting (see Appendix 5 for discussion on how teams might get started)
- developing a process to celebrate successes and communicate the benefits of quality monitoring and improvement working Region-wide.

## IMPLEMENT THE STRUCTURES AND PROCESSES SUPPORT QUALITY

*Developing the structures, processes and accountability framework to support an integrated approach to quality.*



Within three months,

### 4. Establish a Quality Implementation Task Group.

The role of this group is outlined on the following page. It is to be a time limited task group, which would complete its work within 18 months. The Region may consider providing this team with staff or consulting support to assist it to achieve its goals.



**Within six months,**

- 5. Finalize roles and responsibilities for quality.**
- 6. Define and establish integrated teams, which includes a mandate for managing the dimensions of quality.**

In order for quality to be effectively managed, individuals and groups in the Region must have a clear understanding of their role and responsibilities in relation to quality.

Table 1 (following page) proposes respective roles for quality improvement and monitoring for the different groups who provide health care or service in the Region. It demonstrates the clear accountability for integrated teams<sup>1</sup> to be managing and improving quality at the clinical / service level, and for the Region to provide the overall framework for managing quality across the Region.

**Within 12 months,**

- 7. Implement the quality monitoring and reporting structures and processes.**

The quality monitoring and reporting structure and processes will depend on the final organizational structure and reporting relationships developed by the Region.

The suggested key features of the processes for quality monitoring and reporting to the NSHR are:

- the use of quality or performance indicators at a number of levels
  - a synthesis of indicator reporting from team level to the Region, with a Regional Report on Quality being prepared for the Board;
  - a monitoring process based on tracking changes/trends over time;
- a reporting format that highlights trends and quality improvement activity.

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<sup>1</sup> These integrated teams are not "Quality Teams", rather teams with responsibility for delivering and managing health care/service including managing quality/resource use. These teams may establish time limited Quality Improvement teams or other task groups to address specific issues.



**Table 1**      **Roles and Responsibility for Quality**

Accountability Level	Primary Role(s)	Types of Responsibilities
NSHR Board	Establishes the Regional Policy for Quality	Monitors broad health system performance indicators to ensure quality care and service and achievement of Regional goals.  Accountable to the Ministry of Health for health system performance in accordance with the Ministry's accountability framework.
NSHR CEO	Provides the leadership for the development and implementation of an integrated and co-ordinated approach to monitoring and improving quality.  Promotes a Region wide commitment to quality.	Develops Regional Plan for an integrated and co-ordinated approach to quality  Sets Regional goals and objectives for quality improvement  Demonstrates commitment to quality and promotes a Region wide quality culture  Ensures that appropriate structures/ processes are in place to improve quality across the Region
Quality Implementation Group - a regional leadership group  Time limited (maximum 18 months)	Implements the quality plan and evaluates outcomes	Monitors and evaluates the implementation of the quality management plan.  Makes adjustments to the Plan as required.  Monitors Regional quality indicators and gives feedback to appropriate programs & executive  Enable/support Managers to take responsibility for quality within 18 months.
Management	Provides leadership and support to the teams to enable them to achieve their goals for quality  Acts as a "sponsor" to the teams.	Demonstrates commitment to quality and promotes a region wide quality culture.  Helps teams by acting as a resource, eliminating barriers to quality service/care; facilitating quality improvement activity, celebrating successes  Assists with setting and aligning priorities with the Region's goals and objectives  Ensures appropriate linkages to the Region's other quality initiatives and provides context/ framework for team decision-making.



Accountability Level	Primary Role(s)	Types of Responsibilities
Programs and Trans-disciplinary Teams	Manages quality care and service at the program / team level	<p>Identify key client/patient groups, major activities/process, and mandate.</p> <p>Develop quality performance indicators to monitor all aspects of mandate and high risk, high cost, problem prone processes or population.</p> <p>Develop quality management goals and objectives.</p> <p>Develop clinical guidelines and pathways for appropriate populations.</p> <p>Ongoing analysis of variances/trends in indicators.</p> <p>Plan, test and implement quality improvement activities, including setting up CQI implementation task groups.</p> <p>Establish and maintain effective communication systems for quality within the team and with others as appropriate.</p>
Departments / Clinical Groups	Manages quality at the department or professional group level	<p>Maintain responsibility for professional / departmental specific education, credentialing, performance monitoring and maintenance of professional standards.</p> <p>Department specific quality control and monitoring.</p> <p>Department specific quality improvement activities.</p> <p>Establish and maintain effective communication systems for quality within the team and with other departments, medical staff and teams in the facilities and related community agencies.</p>
Individual Staff/Physician	Quality care and service	<p>Continuously look for ways to improve quality of care or service.</p> <p>Work as part of appropriate teams to manage quality.</p> <p>Demonstrate commitment to principles of QI/ QM and to changing practice to improve quality</p>



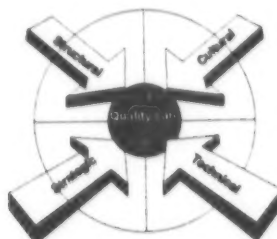
Simply put, the overall reporting framework for the health care system emphasizes clear reporting lines and the synthesis of information to make it practical, digestible and useful.

The processes include the bi-directional flow of information. Meaningful information will be gathered from the clients and communities served by NSHR and brought to the interdisciplinary care/service teams for their analysis and review. This information will be synthesized and moved through the organization (e.g. to facilities, Community Health Centres, and the Integrated Regional Programs). It will be further synthesized and reported via senior management to the CEO and ultimately to the Regional Board.

In turn, leadership and direction will be provided from the Regional Board and senior management to enable and support the sub-organizations and teams as they seek to fulfil the NSHR's mission for everyone on the North Shore.

## **BUILD THE TECHNICAL INFRASTRUCTURE TO SUPPORT QUALITY**

*Developing the infrastructure (information systems, resources, physicians and staff with the necessary skills and training)*



To successfully manage quality the Region will need to build capacity amongst the staff, managers and physicians as well as provide the information systems to collect and manage meaningful data.

While this will be partially dependent upon the outcomes of the NSHR's current planning for a regional information management system, much can be done in terms of identification and development of indicators prior to the implementation of a regional information management system. In fact, many programs and services should be able to develop and monitor indicators using their current information systems.



**Within 6 months,**

- 8. Develop and begin to implement an education plan.**
- 9. Identify key staff persons with the aptitude, attitude and interest in quality, and invest in developing their quality knowledge and skills role in quality.**

This might include:

- using a "train the trainers" approach to teaching select individuals CQI tools (e.g. cause and effect diagrams, process flow diagrams, group decision-making processes, etc.)
- investing in building knowledge/skill within the management team to support and enable teams to work in this new role as "sponsors" to the teams
- investing in team building activities

**Within 12 months,**

- 10. Every health care program or service to have identified performance indicators which can be collected and analyzed using current resources.**

This would include:

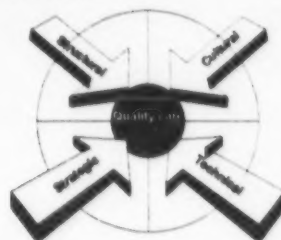
- identifying information needs to support quality management
- investing in the information systems and training
- considering payment of physicians for participation in formal quality management activities
- investing in training/orientation of physicians to quality improvement and monitoring

Physician leadership is important to successful quality improvement and monitoring. There is much literature to support the belief that physicians are more likely to be involved in clinical applications of CQI, and are more comfortable with data driven studies. There is also literature which supports focusing on a nucleus of physicians to be trained and involved in quality improvement and monitoring. The rest of the group would receive "just-in-time" training consistent with their needs and interests.




### ***Align Quality Activities with Strategic Priorities***

*Establish goals for quality which are aligned with the key strategic priorities of the Region, programs or services.*



A principle for this quality plan, and a core value of the North Shore, is meaningful involvement of consumers in defining health care needs and evaluating the quality of services and care. Table 2 illustrates a continuum of consumer involvement in quality.

**Table 2**  
**Continuum of Consumer Involvement in Quality**

					
Consumer complaints are primary method of feedback and not systematically used to improve processes	Input solicited on ad hoc basis	Consumer input regularly solicited for management action	Input is used for developing and implementing plans	Effective feedback system for obtaining consumer information and improving services	Regular and effective methods for obtaining consumer feedback are implemented

**Within six months,**

- 11. Develop guidelines for teams related to meaningful consumer involvement in defining health needs and evaluating care and service outcomes.**



**Within twelve months,**

**12. Teams establish priorities for quality improvement.**

**13. Teams establish a consumer participation strategy.**

At this point the Region is still in the process of defining its health goals related to a broad community participation process. Until that work is complete we recommend that the teams focus on setting priorities for quality improvement in the way that the Canadian Council of Health Service Accreditation suggests... related to processes or populations that are:

- high risk
- high cost
- problem prone
- high volume

Once the Region has defined its health priorities it will need to provide support to teams to ensure that the work they do in developing key quality indicators reflects Regional and program/service priorities.

**14. The Region develop a report to the community and to the Ministry of Health on health system performance and health status.**

The Region is accountable both to its community and to the Ministry for using the resources available to achieve the best health outcomes. The work that the Ministry is doing on accountability should provide the framework for the report to the Ministry. The examples of Regional reports from other jurisdictions provided to the committee during this study might provide a starting point for developing the report to the North Shore community.



## CONCLUSION

This Plan provides a framework for developing and implementing an integrated and co-ordinated approach to monitoring and improving health care and health service in the Region.

Key components of the Plan are:

- the Region's Goals and Principles for Quality
- a proposed accountability framework which outlines roles, responsibilities and reporting relationships
- implementation strategies

Workshop participants talked about the benefits of implementing an evidence based systematic approach to monitoring and improving quality; one that used multidisciplinary teams, involved consumers in meaningful ways and focused both on population health as well as health system outcomes.

A key benefit is the ability to increase accountability and lead to more informed decisions. This will become increasingly important as we continue to restructure and refocus our health care system.

*Prepared by:*

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# APPENDIX E

## INTEGRATING INDICATORS INTO CCHSA'S ACCREDITATION PROGRAM







## THE FUTURE OF ACCREDITATION AND INDICATORS

The Canadian Council on Health Services Accreditation (CCHSA) is working toward integrating indicators into the accreditation program. To achieve this integration, CCHSA has developed an underlying philosophy for the use of performance indicators within the larger context of quality improvement. CCHSA has also developed a framework for how indicators will fit into the accreditation program under development, the AIM accreditation program. Finally, CCHSA has recently completed a study that assessed the reliability and usefulness of six acute care indicators in its Performance Indicators Pilot Test Project. This study provided valuable lessons that will assist CCHSA as they move forward with indicators.

With the Client Centred Accreditation Program introduced in 1995, CCHSA required that organizations develop and use indicators to support evaluation of their services. With the introduction of the AIM accreditation program in 2001, CCHSA will identify a set of indicators that, together with the accreditation standards, will further support health services organizations in their self-assessment and quality improvement activities.

### *Accreditation, Indicators and Quality Improvement*

As an organization that promotes quality in health services, CCHSA supports the use of indicators within the larger framework of quality improvement. Performance measurement or indicators should challenge teams and organizations to provide better services which in turn result in improved health. To improve, services organizations must understand the relationship between their processes of care and service and the results they are trying to achieve.

Accreditation offers a framework that links goals, processes of care, service and indicators. This framework can help teams and organizations to focus their evaluation, quality monitoring and improvement activities. Indicator data gives organizations and the CCHSA's surveyors one more source of information to help them understand the organization's processes and whether these processes are helping the organization to achieve its goals.

In publishing a list of indicators with the AIM standards, CCHSA hopes to facilitate the exchange of comparable data with accredited organizations across Canada. Ultimately, the indicator data will allow for benchmarking between organizations for the purposes of quality improvement. The use of indicators for the purposes of accreditation will be voluntary. The ultimate test of the usefulness of the accreditation



indicators will be the extent to which organizations across Canada use the indicators for quality monitoring and improvement.

### ***CCHSA's Use of Indicator Data***

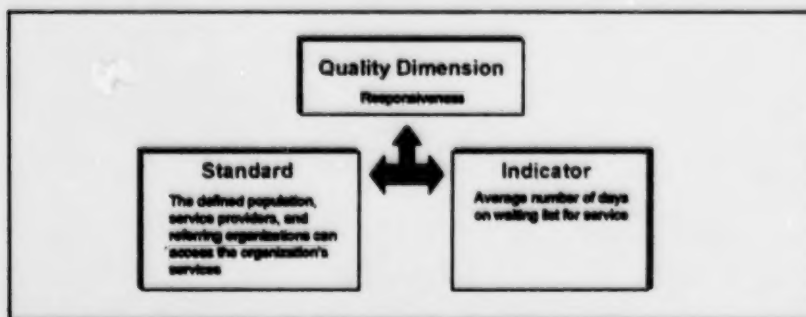
Indicators alone are tools to help teams and organizations. Indicators are neutral; their sole purpose is to provide data. People using the data must analyze them to determine what the data mean in terms of understanding processes. CCHSA will not use indicator data to make judgements about an organization's quality of care and service in isolation of the organization's particular circumstances. CCHSA's focus is not so much on the indicator data, as it is on how the team or organization uses the indicator data to evaluate and improve their processes and outcomes.

At a national level, CCHSA will use the indicator data to understand the trends in compliance with the accreditation standards. Indicator data will offer supplementary information that will assist CCHSA to better understand how organizations are improving against standards over time. By understanding the relationship between indicator data and organizational performance, CCHSA can assist organizations to improve through education and supporting guidelines.

### ***Link Between CCHSA's AIM Standards and Indicators***

Both the standards of the AIM Program and the indicators will be based on CCHSA's four dimensions of quality. These quality dimensions have been identified as responsiveness, system competency, client/community focus and work life.

**Figure 1. EXAMPLE OF A STANDARD, QUALITY DIMENSION, AND INDICATOR**





## IDENTIFICATION OF THE AIM INDICATORS

Because CCHSA's standards cover all aspects of organizational performance, indicators will be identified for all levels of care and service including clinical areas, governance and management functions, and support areas such as human resources management. The indicators will be selected by considering current indicator initiatives taking place across Canada through the Canadian Institute for Health Information, the Ontario Hospital Association Report Card Project, HEALNet and provincial ministries.

### *Lessons Learned from CCHSA's Performance Indicators Pilot Test Project*

Between 1996 and 1999, fourteen organizations across Canada participated in the pilot testing of six acute indicators. The project started with identifying and developing six indicators for the acute care sectors. Data was submitted to the Canadian Institute for Health Information (CIHI), which produced comparative indicator reports for the pilot organizations on a quarterly basis. The results of the pilot test have been instructive in many ways to all those who participated.

The task for selecting indicators fell to a technical committee set up by the National Steering Committee overseeing the project. Selecting the six indicators was not simple or straightforward. It took a number of false starts before the committee was comfortable with a selection process.

We learned that there is no one perfect process for selecting indicators. For the Pilot Test Project, the selection became an iterative process in which a long list of indicators was gradually reduced as it went from the technical committee to the advisory committee and back again. The six indicators selected for the project were:

- ☐ percentage of alternate level of care days (ALC)
- ☐ percentage of cases classified as May Not Require Hospitalization (MNRH)
- ☐ percentage of unplanned readmissions to the same hospital with the same or related diagnosis within 7 days of discharge
- ☐ percentage of cases which are day surgery
- ☐ percentage of days over/under expected length of stay (LOS)
- ☐ average length of stay in the emergency department for patients designated as admitted to the organization



### ***Assessing the Reliability and Usefulness of the Six Indicators***

Various tools were used to assess the reliability of the data and to evaluate the usefulness of the indicators to the teams and senior managers using the data. The following outlines some of our findings.

Looking specifically at the reliability of the data, the project demonstrated the importance of evaluating data quality. Reliability of the indicator data cannot be assumed; there must be mechanisms for assessing and reporting on data quality. This is imperative for the indicator data to be comparative across different organizations.

In order to make fair comparisons between organizations, the data collected must conform to standardized definitions and data collection methods. Unless the users of a measure address potential pitfalls around data quality and comparative reporting, the results produced from the measure may be more misleading than helpful. To ensure consistency of data collection, CCHSA provided education to health records staff and pilot site coordinators. Additional time was spent during the pilot to revisit concerns and issues related to the definitions of the indicator data quality issues.

Ideally, to achieve accurate comparisons between organizations, indicator data should be risk adjusted or collected from different organizations with similar samples of clients. Although risk adjustment was not possible for the project, CIHI provided participants with the edited indicator data on a disk from which they were able to produce their own customized reports and "drill" down for more specific comparisons.

In addition to evaluating the reliability of the data, CCHSA carried out an ongoing evaluation of the usefulness of the indicator to the users (i.e. teams). Determining usefulness is a complex process. It is difficult to separate and then evaluate all of the different factors that affect whether a team or organization will use indicator information. Determining usefulness of an indicator is confounded by many factors such as the skill and knowledge of those working with the data, who is accountable for making changes that will affect the results, and the priorities of the organization.

### **BENEFITS OF USING COMPARATIVE DATA**

Teams involved in the Pilot Test benefited in a number of ways from their participation in the project. The project raised their awareness of indicators and how to use them. Giving staff comparative data provided a focal point for them to discuss and evaluate their processes. They gained an understanding of how indicator data could be used to support decision making.



Staff became sensitive to the importance of good data and good documentation. The role of coding and the health records function was more clearly understood. This mutual understanding helped providers and health records staff work collaboratively to achieve team goals. The project also helped participants work together to identify common issues and solutions.

Through the project CCHSA and participants gained a greater understanding of the factors that influence the successful use of indicators. Putting the structures and processes in place to support staff in using indicators is critical to success. Organizations need to ensure that there are processes for educating staff about indicators and the role that indicators play in achieving the organization's goals and objectives.

Organizations must also be committed to providing the necessary resources for analysing data and helping team members understand the data. Tools for analysing the data should include the use of histograms, run charts and control charts. Teams need an environment that promotes learning in a positive, non-punitive way. Using indicators is not just about data and reports; supporting the user in understanding the data and translating that understanding into quality improvement requires constant communication, education and other financial and human resources.

As CCHSA moves forward in integrating indicators into the accreditation program, it is committed to working with organizations to expand its knowledge and explore ways that it can support and educate accredited organizations.

*Prepared by:*

Canadian Council on Health Services Accreditation

For further information see <http://www.cchsa.ca>.







# APPENDIX F

## CANADIAN QUALITY AWARDS









## CANADIAN QUALITY AWARDS

The *Canada Awards for Excellence* are awarded annually.

### THE NATIONAL QUALITY INSTITUTE (NQI)

NQI is a Canadian not-for-profit independent organization responsible for the development of the *Canadian Quality Criteria* and the *Canadian Healthy Workplace Criteria*.

### CANADIAN QUALITY CRITERIA FOR EXCELLENCE

There are two Criteria models:

Canadian Quality Criteria for Business Excellence  
Canadian Quality Criteria for Public Sector Excellence

Organizations considered for an award must show outstanding continuous achievement in seven key areas:

Leadership  
Planning for Improvement  
Customer Focus  
People Focus  
Process Optimization  
Supplier Focus  
Organizational Performance

### CANADIAN HEALTHY WORKPLACE CRITERIA

The *Canadian Healthy Workplace Criteria* addresses a broad-based approach to health and wellness issues in the workplace. The Criteria include environmental, physical, mental, safety and social issues in a strategic model that helps organizations set goals and manage their wellness programs. The *Canadian Healthy Workplace Criteria* will be used to adjudicate the Healthy Workplace Category of the *Canada Awards for Excellence*.

### AWARD WINNER

The Orillia Soldiers Memorial Hospital, Orillia, Ontario, was awarded a trophy in 1997 for Quality Health Care.



